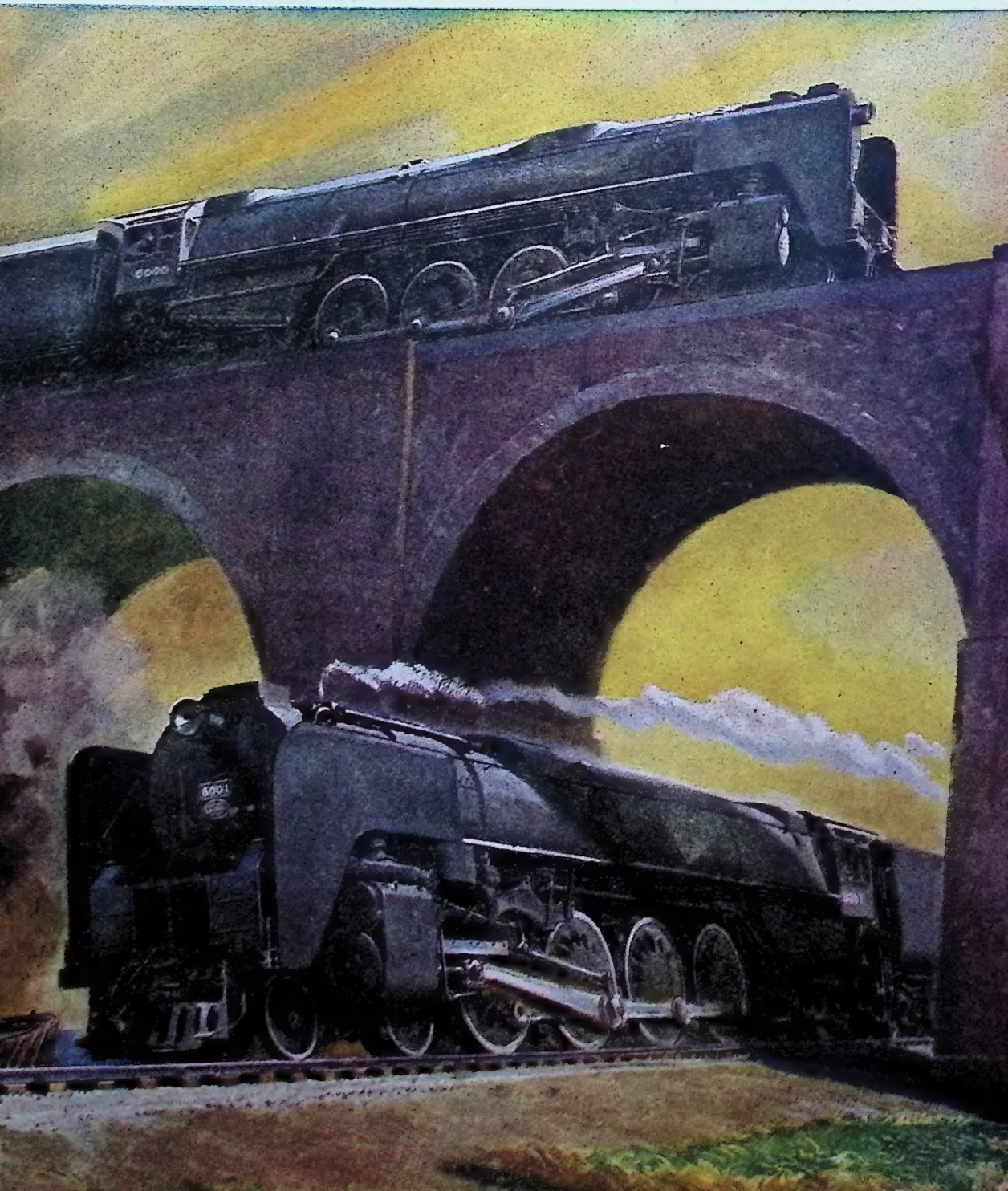
Trains

25¢

January, 1947



Nay Aug Tunnels

Eastbound freight puffing out of the newer of the Nay Aug tunnels on the Lackawanna's main line near Scranton, Pa. To the right is the original double-track bore which is now used for Track 1. Photo by Wayne Brumbaugh, 858 Huntington Ave., Boston, Mass.

Trains

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"There is nothing more wonderful in the mechanical world than the steam railroad. Other means of transportation are steadily growing in importance, but so is the railroad, and for many years to come it will be, as it has been for many years past, our chief means of carrying people and goods from place to place."— T. W. Van Metre in "Trains, Tracks, and Travel."

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The Branch Line Passenger Train

Railroad passenger service on branch lines is a highly controversial subject. I recently rejected a manuscript on this subject because it was too opinionated and put forth the idea so generally held by railroad enthusiasts that railroad management purposely kills off branch lines where they could easily be made profitable. That supposition is so naive that it should hardly need comment and yet it keeps springing up time and again even within the railroad industry itself.

The business problems behind the operation of passenger service, and especially behind the improvement of passenger service, are so diverse and so complicated that it is hard for anyone on the outside to draw conclusions without knowing the full background. There is furthermore a wide difference of opinion among railroad executives themselves as to how much chance there is for recapturing passenger business even if considerable expenditures are made. On the one hand are railroads like Boston & Maine, which keeps branch line runs until forced to quit, and on the other extreme are executives like the late Leonor Loree, who once changed the schedule of an unprofitable branch line train to 2:30 in the morning to hasten its demise.

So we have the picture of a large industry with hundreds of separate managements, each with its own ideas, and each with its own levels of managerial skill. Some railroads can apparently take a weed-grown, almost deserted branch line, and territory that is thinly populated and create a passenger run that pays its way. Other roads can't see the possibility of converting a losing run into a profitable run and deliberately discourage business so that the losing run can be abandoned more quickly.

There is this same breadth of managerial skill in any other business and yet it usually goes without public comment because other businesses don't touch the public as closely as do the railroads. Take off a railroad passenger train and the public loses a service which even though it is only held in abeyance for that evil day when the car won't start, is nevertheless recognized as an important if standby facility.

The question of whether branch line service can be improved to a point where it is profitable usually hinges upon two facts: Whether the same amount of money could be spent more profitably on improving service in some other part of the system, and whether the branch line really has enough potential business to justify a train. The mere fact that a bus company runs a bus load of passengers down a parallel paved highway doesn't necessarily mean that the railroad could get that whole bus load of passengers, and even a bus load of passengers won't make a train pay.

So the railroad may make careful traffic studies of people and their movements, the kind of schedules which would be needed and the kind of equipment which would be necessary to handle those schedules. This in turn figures down to a certain necessary capital investment, and another necessary commitment in the form of monthly operating expenses to keep the service going day after day regardless of whether people ride or not. Then comes the still further question as to whether that same amount of money could not be spent to better advantage starting a new train on the main line, or perhaps installing C. T. C. somewhere to relieve a traffic bottleneck, improving station facilities on the main line, or speeding up freight schedules.

From the purely financial angle it is pretty hard to accuse railroad management at large of being financial dunderheads and bluntly bypassing an opportunity for traffic. It is perhaps more accurate to say that in some cases railroad managements have not had the vision to foresee what could be done with modern passenger equipment, and in other cases railroad managements have underestimated the good will and advertising value of passenger service in securing for the road a greater freight traffic.

By and large, however, it seems more to the point that the increased train mile operating costs at 1946 wages, and the lower per mile revenues at 1946 fares have made it more and more necessary that a passenger train be heavily loaded in order to make money, and most branch lines just don't have that much potential business no matter how you look at it. Management optimism can't cure that one and it seems more appropriate that railroad energy should be concentrated as fast as possible on building up mainline and subsidiary mainline passenger business where people can be handled in profitable trainload lots rather than just by the car full.

U. S. Originates More Tonnage Than It Terminates

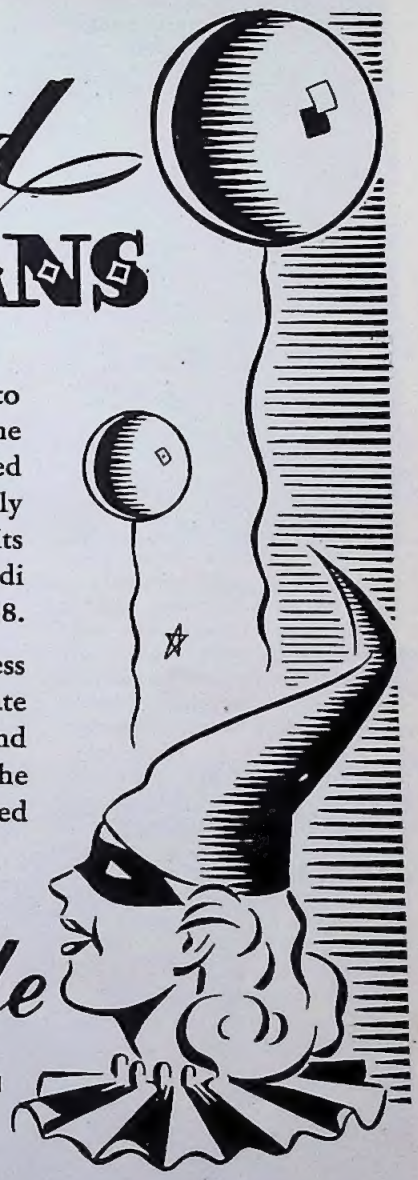
In 1945, according to an I. C. C. comment based on the returns of Class 1 railroads, the United States originated 94,656,216 more tons of carload freight than it terminated. The lack of balance is due largely to exports to Canada. Twenty-three states originated more tonnage than they terminated. They are, together with the excess in tons originated over tons terminated:

State and principal commodity originated	Per cent excess
Alabama, coal	27.7
Arkansas, coal	36.3
Colorado, coal	0.8
Florida, phosphate rock	8.2
Idaho, potatoes	43.1
Illinois, coal	14.1
Kansas, wheat	60.0
Kentucky, coal	265.4
Louisiana, manufactures and miscellaneous not otherwise specified	8.9
Minnesota, iron ore	197.8
Mississippi, crude petroleum	53.7
Montana, wheat	74.5
Nebraska, corn	11.6
New Mexico, fertilizers, not otherwise specified	69.2
North Dakota, wheat	148.7
Oklahoma, wheat	56.8
Oregon, lumber	16.4
Pennsylvania, coal	34.0
South Dakota, wheat	90.6
Texas, refined petroleum oils	30.2
Utah, coal	70.0
West Virginia, coal	501.6
Wyoming, coal	361.2

Excess in tons terminated over tons originated:

State and principal commodity terminated	Per cent excess
Arizona, copper ore for smelting	65.6
California, manufactures and miscellaneous, not otherwise specified	25.6
Delaware, coal	156.8
Georgia, coal	26.9
Indiana, coal	27.2
Iowa, coal	23.8
Maryland, coal	163.0
Michigan, coal	9.1
Missouri, coal	20.3
Nevada, fuel, road and petroleum residual oils	5.9
New England States, coal	164.5
New Jersey, coal	253.6
New York, coal	107.7
North Carolina, coal	101.3
Ohio, coal	40.4
South Carolina, coal	49.4
Tennessee, coal	36.2
Virginia, coal	51.9
Washington, logs	20.7
Wisconsin, coal	51.5

In Old NEW ORLEANS



MARDI GRAS popularly applies to the carnival season, when most visitors come to New Orleans — several days of masked gayety and parades when care is the only stranger in this great port city that retains its historic, old-world charm. The 1947 Mardi Gras will reach its exciting climax February 18.

Here is a tonic . . . a respite from the stress of the times . . . that will freshen and invigorate you. And there will be roomy relaxation and scenery of pleasant variety . . . through the Ozark and Ouachita mountains, and the storied South . . . aboard the

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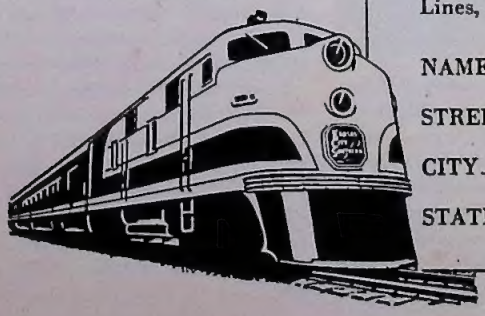


CLIP AND MAIL for your free copy of the attractive "NEW ORLEANS NOTEBOOK"—a delightful description of this historic and important port city. Address W. C. Clark, Passenger Traffic Manager, Dept. D, Kansas City Southern Lines, Shreveport 92, Louisiana.

NAME.....

STREET.....

CITY.....

STATE.....

C&O Orders Replacement of All Passenger Equipment

Orders for the replacement of every passenger car — sleepers, parlor cars, and coaches — on the Chesapeake & Ohio Lines have been placed by the road in the most ambitious passenger modernization program ever undertaken by a railroad. The order is for 284 cars and is in addition to the *Pere Marquettes*, first two postwar streamliners, already in service on the C&O's Pere Marquette, and the two 14-car *Chessie* streamliners already on order from the Budd Company for Washington-Cincinnati daylight service.

The new cars will be built by Pullman-Standard and will be financed by equipment trust certificates at an interest cost of less than 2 per cent. Robert Young, chairman of the C&O board, points out that these record-breaking easy terms are available to any railroad, bankrupt or solvent, in the country for equipment purchases. Mr. Young hopes that other roads will follow C&O's example of complete replacement of mainline passenger equipment and believes that such action could do far more to employment and prosperity than has been contributed by railroad passenger car building in the entire past 35 years.

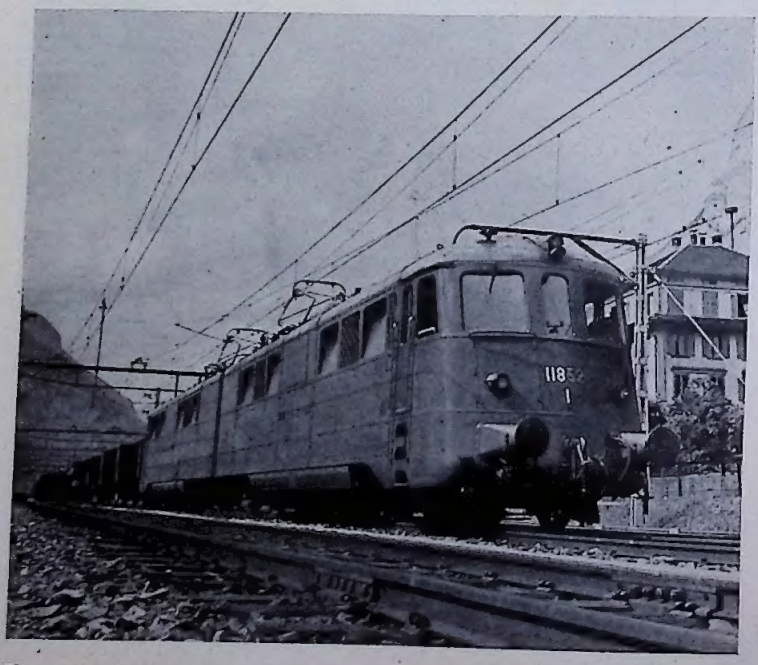
With this equipment C&O will equip brand new all mainline trains on not only the parent road, but also the Nickel Plate and the Pere Marquette. Deliveries are scheduled for the last quarter of 1947. "The significance of this action by the directors of the C&O," Mr. Young stated, "is that it comes at a time when economists are becoming concerned about employment."

New Trains

A new Chicago-Los Angeles streamlined service will be started on delivery of the new equipment early in 1947 by the Rock Island and the Southern Pacific over the Golden State Route. The new trains will be of stainless steel finish, Diesel powered, and will run triweekly on a 39¾ hour schedule. Equipment includes day-night coaches, all-room sleepers, diners, coffee-shop lounge and observation cars. At about the same time new equipment will be placed in the make-up of the *Golden State Limited*, fastest regular fare train over the same route.

Twenty-six cars of the huge C&O order for new passenger equipment will be used to inaugurate streamlined service over the Pere Marquette between Chicago and Grand Rapids and Muskegon. The two streamliners are expected late this year, and will operate twice daily, morning and evening in both directions. Tentative schedule calls for 3½ hours on the Grand Rapids run as compared to present schedule of 4½ hours. Equipment will include coaches, diners, and tavern-lounge cars. Decision to start the new service follows the success of the *Pere Marquettes* on the Grand Rapids-Detroit run. These two streamliners turned in a 74 per cent traffic increase in their first three months.

The Rock Island plans a new high-speed daylight *Rocket* between Chicago and Omaha via the Tri-Cities and Des Moines. Departures from terminals will be in the morning and the 503-mile run will be completed by early evening. This is a continuation of the Rock Island's policy of faith in the future of the daytime coach streamliner. New equipment is also being obtained for the *Twin Star Rockets* which connect Minneapolis and St. Paul with Houston via Des Moines, Kansas City, Fort Worth, and Dallas.



The most powerful electric locomotive in the world, completed for the St. Gotthart line of the Swiss Federal Railroad just before the war, has now turned in enough service to prove that it is a day-to-day practicality and not a freak. It has a maximum rating of 12,100 horsepower for one hour, 10,800 continuous horsepower. Adhesion weight can be increased for starting by lifting the middle trailing wheels with pneumatic cylinders. Line voltage is 15,000 at 16 2/3 cycles. Wheel arrangement is 1-B-1-B-1+1-B-1-B-1 and each driving axle is powered by two motors. Speed control is by high voltage step controller. Top speed is 69 m. p. h.

Locomotive Notes

New Haven is ordering 15 4500 horsepower Diesel-electric locomotives for use in freight service on the Poughkeepsie bridge line between New Haven and Maybrook, N. Y. New Haven now has 60 2000 horsepower units in dual freight and passenger service on the New York-Boston Shore Line. . . . Springfield Suburban, a switching road in Springfield, O., has substituted 44-ton Diesels for electric power. Other short lines using these small Diesel-electrics include Grafton & Upton (Mass.), formerly an electric line, Lourinburg & Southern (N. C.), Manistee & Northeastern (Mich.), Coudersport & Port Allegany (Pa.), and Alexander RR. (N. C.). The tendency seems especially strong for small electric roads to Dieselize

New Haven 4000 horsepower Diesels, split into 2000 horsepower units, took over many steam runs during coal strike.

and thus escape the fixed charges of maintaining power distribution systems which are large in comparison with traffic. Besides those mentioned above other recent electric line conversions include Oregon Electric, parts of Pacific Electric and the projected Dieselization of Jamestown, Westfield & Northwestern.

Gas Turbine Locomotive

The first two experimental coal burning gas turbine locomotives now on order for the Locomotive Development Committee of Bituminous Coal Research, Inc., are expected to go on the rails early in 1948. John I. Yellott, research director of the project, says operating costs of about 26 cents a mile are expected for the gas turbines as against 56 to 60 cents a mile for Diesels. "The rising cost of coal is making its competitive position more difficult," said Mr. Yellott, "but the sponsors of the coal burning gas turbine are confident that this highly efficient prime mover will contribute to maintaining coal as the predominant railroad fuel."

The gas turbine burns lump coal the same as the reciprocating steam locomotive, but grinds and powders it. It requires no water and can carry fuel for 1000-mile trips. It is quiet and smokeless and the small amounts of fly ash can be used to sand the rails.

New Station for Toledo

The New York Central is working on plans for a new Union Station for Toledo and, although no formal announcement has yet been made, it is understood the project will cost some $3 million. It will be on the site of the present station, and the building will be of somewhat the same arrangement used by the NYC in Buffalo, with a wide concourse extending across the tracks. A plaza in front of the main entrance will be at concourse and waiting room level.

Track layout will be revised to some extent, so that with the new building the project will be one of the finest and most efficient in the country. The old Toledo station, built in 1886, has compared unfavorably with the new stations put up by NYC in recent decades at other large cities on the main line. C&O, B&O, Pere Marquette, and Wabash also use the same station.

The Coal Strike and the Largest Diesel

The world's largest and most powerful Diesel-electric locomotive, built by Fairbanks, Morse & Co. for the Kansas City Southern, was to be fittingly introduced to the public at inaugural ceremonies in Pittsburg, Kan., December 7. But even as the new locomotive left the General Electric erecting shop at Erie, Pa., and moved westward over the New York Central Railroad the shadow of John L. Lewis crept across the land.

By the time the four units of 8000 horsepower had been transferred as dead freight to the Wabash at Toledo and were on their way toward home rails at Kansas City the railroads had been ordered to reduce coal burning passenger service by 25 per cent. Diesels were suddenly at a premium. The Milwaukee Road said, "Some people questioned us when we replaced the high-speed steam locomotives with Diesels on the *Hiawathas*, but now there is no doubt we did the right thing."

As a Wabash steam locomotive pulled the 259 feet of dead engine across Missouri the public was already learning which passenger trains were considered least necessary. Many a commuter altered his ingrained daily habits. Pullman car diagrams were being shuffled like pinochle decks in anticipation of the further cut to 50 per cent of normal service by the end of the week.

But it was the freight embargo which really hurt. Even the threat of a freight embargo had disrupted normal traffic movement by the time the world's largest Diesel arrived in Pittsburg, Kan., Tuesday evening, December 3. Diesel

Donald W. Furler, 94 W. Main St., Glen Rock, N. J.

Pittsburgh, Shawmut & Northern freight train at Claremont, Pa. An I. C. C. examiner has recommended that the commission allow abandonment of this entire 190-mile system, which has been in receivership since 1905. The company is willing to sell the line, or any portion, at a price in line with salvage value, but connecting roads have shown no interest. Principal traffic is bituminous coal. No passenger service is operated. Largest cities on line are Hornell and Olean, otherwise served.

switchers were in road service from coast to coast. Shippers were flooding the l. c. l. stations, beating the December 6 dead line. A parcel-post rush that dwarfed Christmas records moved in a tidal wave ahead of the Thursday midnight cutoff time.

Kansas City Southern moved fast. This was no time for formality. It was a time for every non-coal burning piece of motive power to get down to brass tacks. Twenty-four hours after arrival in Pittsburg KCS roundhouse crews had removed the boxing from headlights and other exposed parts of the shiny new red and yellow Diesel, had inspected, fueled, and serviced it, and the world's largest Diesel-electric left town on southbound fast freight No. 77, 11:15 p. m., December 4. All ceremony was canceled and on December 7 when the crowds might have been watching dignitaries at the dedication platform, the locomotive had already put in three days of productive service over the 1.8 per cent grades between Pittsburg and De Queen, Ark.

By that same afternoon the coal strike was off, and railroading came back to normal. But the world's largest Diesel never did make its formal debut.

In the Railroad Headlight

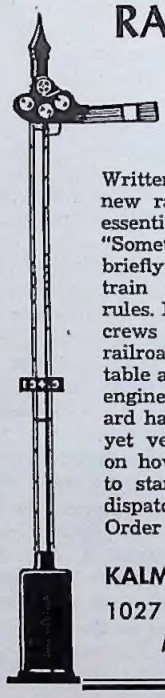
In loading more than 45,000 freight cars for Norfolk & Western at Norfolk during the past 14 years, G. G. ("Go Getem") Browder has placed a personal thank-you note in every car. He has not only asked for a continuance of the business but for suggestions as to how he might serve the shipper better. As a result he has received many excellent suggestions on loading and has eight scrapbooks with letters from firms all over the country.

On his vacations Browder has traveled to all parts of the country, visiting firms for whom he has loaded cars. He always stresses the advantages of shipping by rail, and to make N&W's service more personal remembers all the shipper likes and dislikes that he learns through letters and his trips. For instance, one firm may prefer 36-foot box cars because of the spacing of its warehouse doors; another must have low roof cars because of a close clearance tunnel into its property. Some firms wish merchandise loaded in a certain order for convenience in unloading.

In the course of his work Browder handled and checked the longest freight bill ever issued. It called for 1772 pieces of freight in four box cars, and the bill measured 57 feet 5 inches in length.

The responses Browder has re-

"SOMETHING ABOUT RAILROADING"



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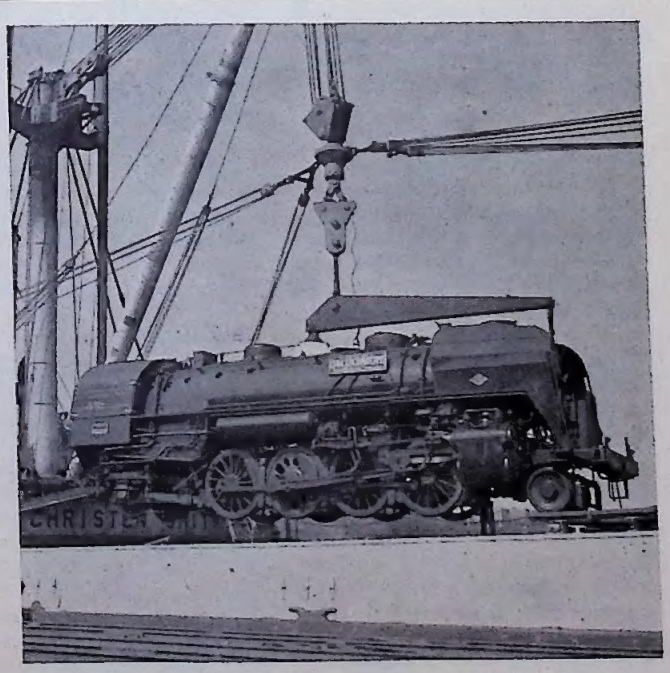
to speed the rehabilitation of France

Eighty Lima-built steam locomotives have already been shipped to France to speed the rehabilitation of her war-torn railroads. These are part of an order for 180 2-8-2 steam locomotives that have been specially designed to meet the requirements of this country whose transportation system was decimated by the war.

Illustrated at right is one of these locomotives being loaded aboard the "S. S. Belpamela" at Pier 9 of the New York Central Railroad in Weehawken, N. J., in September of 1946.



LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

The Baltimore & Ohio roster includes two locomotives which run on rubber tires and are used for parades. One is a model of the Dutch Wagon which was the first engine into Wheeling, W. Va., in 1853. This prototype was selected because the inside cylinders made it easy to build. The other is a modern Diesel. Both are shown in action during the Chillicothe, O., sesquicentennial parade.

ceived show what the courtesy and personal attention of one man can do even in such a large and usually impersonal business as railroading. Other railroad men across the country are likewise doing good jobs of getting and keeping business on the rails. Suggestions for future write-ups in this column will be appreciated by the editors of TRAINS.

Edward G. Budd Dies

A pioneer in the development of modern railroad passenger transportation, Edward G. Budd, died November 30. The Budd Company, of which Mr. Budd was founder and president, built the first stainless steel streamline train, the *Pioneer Zephyr*, in 1934, and up to the beginning of the war had built 487 stainless steel streamlined cars, including 47 complete trains, for 14 railroads.

The Budd stainless steel car was fundamentally different in its engineering from the traditional girder frame car. A truss was built into the side framing and this truss, together with the roof of the car, acted as a structural member to help carry the load. Thus the car could be lighter than if only the lower portion of the car carried the load, supporting all the superstructure. But the Budd Company's contribution was more than technical, for within and outside the railroad industry the company preached the importance of comfort in attracting passengers and made the point that it was better to design a coach for 60 passengers and have it full than to design a more crowded car for 72 passengers and have it half full.

What's Become of—

The first streamlined lightweight Pullman car built for regular train service, the observation-bedroom car *George M. Pullman*, was exhibited at the Chicago World's Fair in 1933-34. Now it is running regularly on one train of the Santa Fe's *Super Chief*.

New Equipment

The government has finally set a price for resale of the troop sleepers and kitchen cars built during the war and used for emergency troop train service. These cars are of box car shape, but have high-speed trucks and passenger car brake and heating equipment. They will be sold for approximately the price of box cars, and we may expect to see at least some of them, with sealed up windows, going into storage mail and express service on various railroads. . . . Missouri Pacific has ordered additional Diesel locomotives and streamlined passenger cars to take care of the extension of its planned *Sunshine Eagle* service to Mexico City as the *Aztec Eagle*. MoPac has also announced that it will build a freight car erecting shop at DeSoto, Mo., capable of building 1300 cars annually. This is based upon replacing MoPac's freight rolling stock after an average life of 25 years. Some cars may also be built here for MoPac's Texas subsidiaries and for American Refrigerator Transit, jointly owned by Missouri Pacific and Wabash, which recently announced plans for 2000 new reefers.

The first Budd postwar stainless steel passenger car has been delivered to New York Central. It is a coach, part of an order for 239 coaches, diners, sleepers, and recreation cars. The coaches will re-equip the *Empire State Express* and *Pacemaker*. . . . Car building is still adversely affected by the steel shortage and supplier strikes. Only 3828 freight cars were delivered in October, compared to 4016 in September and 45,527 on order as of November 1. . . . Two of Chicago Elevated's four articulated experimental coach units have been started at Pullman-Standard. Each unit has three articulated cars mounted on four P. C. C. type motor trucks.

New Haven has ordered 27 new sleeping cars for the *Owl*, its famous New York-Boston all-sleeper train, and the *Federal Express*, which operates between Boston and Washington. All will be room cars of lightweight construction with stainless steel exteriors. . . . Minneapolis & St. Louis has ordered 600 box cars, 150 gondolas and a 1000 horsepower Diesel road locomotive for 1947 delivery. A 4050 horsepower freight Diesel was delivered to the road in November, and M&StL is replacing 8500 tons of mainline rail. . . . Boston & Maine will give school children of the four northern New England states the opportunity of naming 24 new coaches and restaurant-lounge cars to be delivered early next year. . . . Erie has finished the first of the 15 modernized coaches which will be used with Diesel power by the middle of next year on its Chicago-New York through service. Rebuilt from standard heavy steel cars, the new coaches not only have smart interiors but present a new look from the outside. Each pair of windows has

Bay State Freight

This heavy freight is rounding a curve on the Boston & Maine's busy line between Troy and Boston. Along this route come raw materials, coal and oil from New York Central connections and in return the M&M sends back manufactured goods and other products from New England. Until recently, electric locomotives hauled all steam trains through the long Hoosac Tunnel but trolley wire has now been removed and the western part of the line is completely Dieselized. These locomotives, with hoodlike Coffin feedwater heaters, are now operating on Santa Fe and Southern Pacific. Photo taken at South Ashburham by H. F. Harvey, 65 Olean St., Worcester, Mass.

been replaced by a single wide picture window and the roof has been smoothed off to a streamline contour from end to end. Work is being done in Erie's Susquehanna shops.

Rock Island Cutoff

Rock Island has opened the new 16-mile line between Floris and Paris, Ia., which shortens distance by 1½ miles and reduces curves to one degree or less and grades to one half of one per cent. This is the fourth relocation project to be completed on the Golden State route across Iowa, all part of a large-scale program to improve the entire line between Chicago and the Southwest. The new joint Milwauke Road-Rock Island bridge across the Missouri River at Kansas City was another step in the program, as is also the 17-mile relocation which has been started between Brighton and Ainsworth, Ia.

NYC Cuts Off Curve

The New York Central is moving the channel of the Mohawk River in Little Falls, N. Y., to permit cutting across and straightening Gulf Curve, most restricting curve on the road's main line.

The Public Needs Efficient Railroading

President Truman's shotgun settlement of the railroad strike last spring turned out to be no more popular with railroad management than with the Brotherhoods. The increase in wages itself was enough to throw the railroad industry well into the red for all of 1946 and, with the dilatory tactics of the I. C. C. about freight rate increases, to upset many well calculated improvement programs for the future. It also, of course, upset all plans for reducing passenger fares to a coach level of 1½ cents a mile, although with other prices as they are the present 2.2 cents a mile is comparatively as low as 1½ cents would have been before the war.

But the worst element of the forced settlement is now becoming evident to all. The Brotherhood demand for changes in working rules was merely put off, not settled, and the railroads paid an extra 2½ cents an hour increase, or $100 million, for a year's delay of a question that threatens to be even more explosive this year than last.

In certain of the proposed rule changes the public has a large and direct interest. These are the rules which have a featherbedding aspect, and the public interest is in the age-old struggle to get a higher standard of living out of technological advances. Labor has traditionally resisted the machine because labor has been afraid of losing jobs, and yet the machine has always created more jobs than it has taken away, and has also made possible the shorter work week and higher standard of living. No matter how much money is in a man's pay envelope, he cannot buy more with that money than is first created. In other words the average standard of living cannot be higher than average per man production.

The railroad is one of our primary tools of production. The gradual increase in railroad efficiency has enabled a consistent lowering of freight rates and a consequent growth in freight traffic which has been a part of the higher standard of living all of us enjoy. Now the Brotherhoods would limit freight trains to 70 cars, passenger trains to 14 cars. They would put extra, unneeded men in the trailing cabs of multiple unit Diesel-electrics.

Of course, from the shortsighted view this would mean more jobs for railroad men. But the public would pay for it in still higher freight rates, and still less hopes of decreased passenger fares. Surely, all of us have learned in the sad experience of the past few years about the intimate relationship between labor costs and prices. In the long run even railroad labor itself would not benefit. If it is right to limit train lengths now, it was just as right to limit trains a couple of generations ago. Where would the railroads be today if freight trains had been limited to 35 cars and passenger trains to seven cars? How many railroad jobs would there be today?

Public interest in a higher standard of living demands that we exploit to the full the productivity of every machine. Industry must be always looking for better ways of doing things, more efficient methods of manufacture. If the railroads had frozen their methods of operation in 1910 instead of continuing to haul more per train and more per man, it would have been just as proper for every other branch of industry to freeze its production at that time, and today we'd have no radios, no mechanical refrigerators, only a very few automobiles for the very rich, few paved streets, no highways, very few electric lights and appliances, and so on. The reason should be obvious. If everybody, including the railroad men, were still doing things with the 1910 efficiency there just would not be man power enough to accomplish any more production per capita than in 1910, and no matter how many wage increases we'd put through in the meantime the money could not buy goods that weren't being made.

It is no more right for labor to freeze production by union contract than it is for management to freeze production by buying patents for improved processes and then salting these patents away in a safe without using them. The C.I. O. steelworkers, in their educational program for greater steel production per worker, have set an example for all labor. Recently the national officers of the A. F. L. have been stressing the need for greater production if labor is to earn more.

After all, the bosses on the railroads are not necessarily concerned in this for their own selfish purposes. They can usually get good jobs elsewhere if the railroads go under. Railroad owners are so accustomed to restricted dividends that they have about given up caring. The bondholders have security in their mortgages. But it is railroad labor which has the greatest stake in the future of the railroad industry, and it is for railroad labor that we plead. The great American public, Mr. Consumer, will not continue to pay the wages of railroad labor unless he gets an increasing money's worth in transportation, and railroad labor, if it wants to keep alive this great occupation of railroading, should be working with railroad management to improve the efficiency of the railroad, instead of asking for limits on trains and more men in the cab of a Diesel.

A. C. Kalmbach.

Route of the Freight 400's

Grand Trunk Western, pioneer in fast freight service, rushes perishable goods at passenger train speeds from Chicago to the East

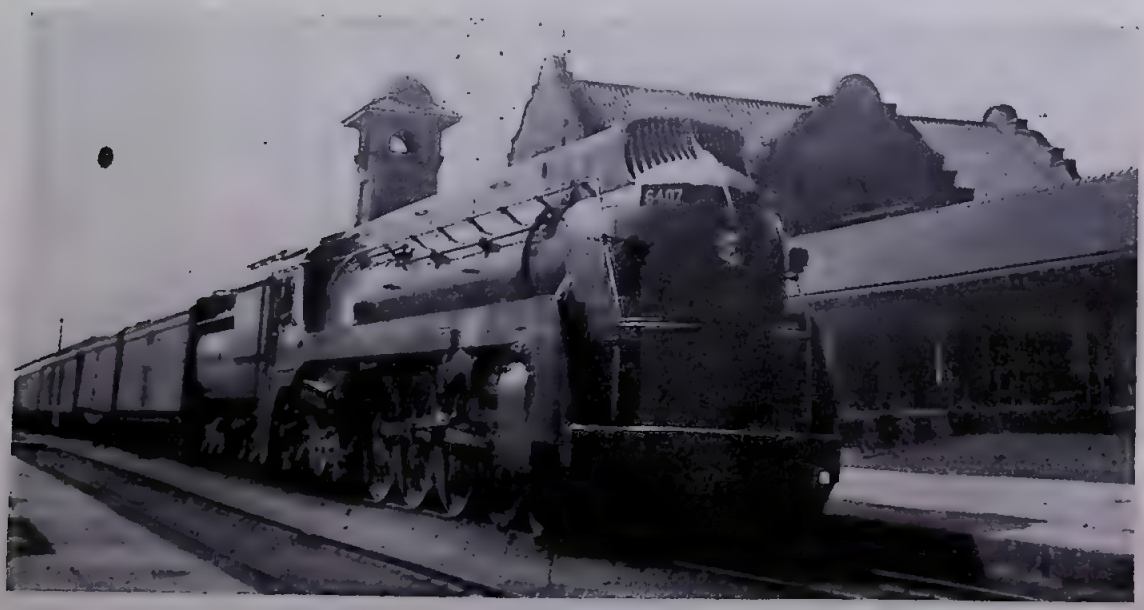
BY CLELAND B. WYLLIE

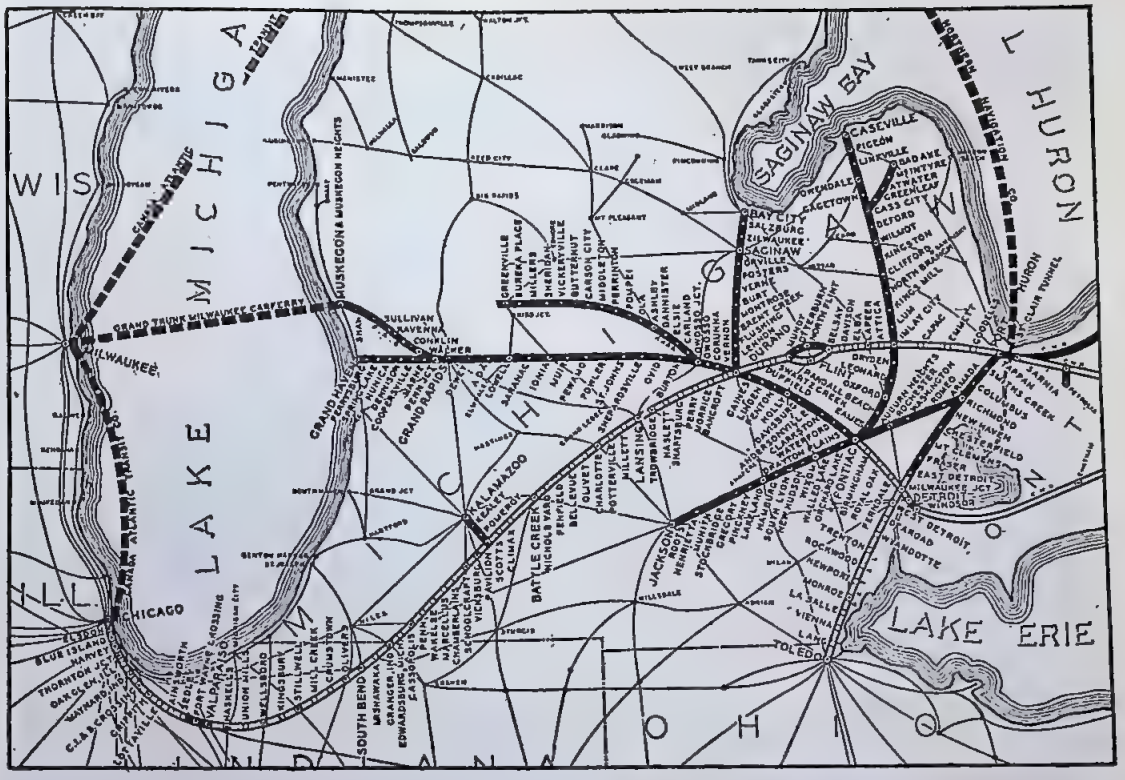
Strong right arm of the Canadian National Railways is its American line, the Grand Trunk Western, which reaches down from Port Huron, Mich., to tap the farming, industrial, and mineral wealth of the Middle West and, through connections, all the territory south and southwest of Chicago. Three states, Michigan, Indiana, and Illinois, are served by GTW rails, while a fourth, Wisconsin, is served by a car ferry line across Lake Michigan to Milwaukee.

Nearly 90 per cent of its income is derived from freight, 30 per cent of which originates on line. Detroit and other Michigan cities furnish about 18 per cent of total freight revenue with their shipments of finished automobiles, trucks, bodies, and parts. Coal produces another 11 per cent and an equal amount comes from the list of commodities grouped in I. C. C. reports under "manufactures and miscellaneous not otherwise specified." Nine per cent comes from iron and steel, essential raw materials for the auto industry; and less-than-carload freight adds another five per cent. These five classifications bring in slightly more than half of the freight revenue.

Other important contributors, roughly in the order of their importance, are lumber, fresh meats, gasoline and oil, scrap iron and scrap steel, newsprint, canned food products, oranges and grapefruit, cereal food products, machinery and boilers, gravel and sand, and salt.

Like other roads, the GTW represents the consolidation of many lines, although the present corporate setup dates back only to 1929. Until May 31, 1946, it was listed among roads operating more than 1000 miles of road, but the abandonment of 49 miles of branch line between Greenville and Muskegon in Michigan has reduced the mileage operated to 976. Michigan has the bulk of the trackage with 865 miles, Indiana has 81, and Illinois 30. To provide the car ferry link with Wisconsin, the railroad





↑ The Grand Trunk Western's Chicago Division swings around the south end of Lake Michigan, then travels northeasterly across northwest Indiana and southern Michigan to Port Huron, connecting with the Detroit Division at Durand. A car ferry connects Milwaukee with Muskegon. ↙ The Maple Leaf, behind a streamlined 4-8-4, has two carloads of fresh strawberries at the head end as it pulls into Battle Creek. Watching for hotboxes is important on any freight →.

operates the Grand Trunk Milwaukee Car Ferry Company, which owns three steel ferries, each capable of handling 28 freight cars and 16 passengers. These boats run the year 'round despite winter storms and ice, with a scheduled time of 6½ hours across the 80 miles of Lake Michigan between Muskegon and Milwaukee.

Most important part of the system is the Chicago Division, which includes all Illinois and Indiana mileage and 224 miles in Michigan. All the rest of the trackage is grouped into the Detroit Division, which includes two lines classified as mainline track. One of these extends 197 miles from Detroit to Muskegon, intersecting the Chicago Division at Durand, 67 miles northwest of Detroit [Dec. '45 TRAINS]. The other is the 59-mile Mt. Clemens subdivision between West Detroit and Port Huron.

The Chicago Division's actual mileage is

Canadian National photo by Ken Haud.

Leonard Koolman; courtesy Canadian National Railways.

The car ferry Madison ↑ is loaded at Muskegon for its 80-mile trip across Lake Michigan to Milwaukee. Train 21 on the Detroit-Muskegon run stops at Durand →, milepost 122 from Grand Haven, to drop cars for train 17 into Chicago.

334.56 miles, including 1.43 miles of trackage rights over the NYC at South Bend, Ind., and 4.85 miles over the Chicago & Western Indiana between 49th Street and Dearborn Station in Chicago. To reach this C&WI trackage, passenger trains actually run straight east for 3.9 miles from Elsdon Yard. This peculiarity of running east to enter Chicago is due to the Grand Trunk's late entrance into the city. By 1880, the best routes along the lake front were already occupied, and it was decided to enter via the "back door" rather than lease trackage and terminal rights from competitors.

So the tracks were swung far away from the lake front to Elsdon. This move helped freight business but added 15 miles to the route between Chicago and South Bend in contrast to NYC's lake front right of way.

The Chicago Division is double-track except for 5.46 miles between Sedley and Valparaiso in Indiana. Color light signals, equipped for approach lighting, control the movements of trains along with orders from dispatchers at Battle Creek. The roadbed is rock ballasted and is laid with 110- and 130-pound rail.

Over the Chicago Division run a fleet of trains known as the "400's." But these are not sleek streamlined passenger trains such as those of the Chicago & North Western. The original 400 of the C&NW dates back only to 1935, whereas the Grand Trunk Western has operated its 400's for nearly half a century. These 48-year-old trains are fast freights, and their claim to fame has evaded the spotlight except in circles where the chief concern is moving freight quickly.

It was in 1898 that the Grand Trunk Western (then known as the Chicago & Grand Trunk) began numbering its freight trains. One of the pioneers in fast freight service, the road used the series of numbers in the 480's and 490's for its manifest runs. These numbers have become

traditional with fast freights on the GTW and are still used to designate the hot-shots that hurry between Chicago and points in eastern and northeastern United States and the cities of eastern Canada.

Fastest of all the freight 400's is 490, which makes the nightly run between Chicago and Port Huron in about eight hours. Let's climb aboard the morency orange caboose of 490 as it sits awaiting its train in Elsdon Yard, in the southwest corner of Chicago, and see what we can learn about the operation of this fast freight.

Conductor Dave Worst is busy out in the yard when we arrive, but Rear-End Brakeman Wayne Walters takes us in hand and shows us about, explaining that when we leave Elsdon about 8:30 p. m. we'll have only a few cars on ahead of us, as most loads are added at Blue Island, 11 miles to the south, where connection is made with the Indiana Harbor Belt Railroad. The trip tonight is something of an occasion for Walters, for it's his last ride on 490. His application for a transfer to an earlier run has gone through and now he'll be able to hit the hay a few hours sooner at his home near Battle Creek, Mich., where he runs a farm on his days off from railroading.

Walters explains that the train is made up by a yard crew while both the caboose and the road engine wait on adjoining tracks. He takes us to the engine assigned to 490 tonight and introduces us to the head-end crew: Engineer Ernie Haugh, Fireman M. V. Yeoman, and Brakeman H. V. Spaulding. Haugh shows us through the 6317, a huge Mountain type locomotive. Properly impressed by the maze of pipes and myriad valves and gauges and the size of the firebox which Yeoman shows us, we go back to the caboose and await the highball, which isn't long in coming.

The yard crew has made up a train of seven cars of meat and rush merchandise and is now tacking them onto the road engine. The Diesel switcher completes its work by adding our caboose with a crash that makes us glad we're sitting in one of the comfortable chairs instead

Kurdette Shattuck, 108 E. Exchange St., Owosso, Mich.

of standing on our feet. Conductor Worst gives the signal and climbs aboard, and we're off for Blue Island. Our watch tells us it's 8:40 p.m.

We learn that only rush cars destined mostly for Toronto, Montreal, Portland, and Boston are handled on 490. This is no way freight; this is Grand Trunk's best.

Just 17 minutes after leaving Elsdon Yard we pull into Blue Island and find the Indiana Harbor has brought us 29 loads of perishables from western connections, including three cars of grapes from California, bound for eastern markets. The cars are added in various cuts as the Diesel switcher breaks up the IHB train. Car inspectors are busy outside as a car checker climbs aboard and goes over his waybills with Worst. It sounds like a complicated game of bingo as they call back and forth:

"52387 PFE." "52387 PFE."
"13015 NADX." "13015 NADX."
"74503 PFE." "74503 PFE."
"93509 PFE." "93509 PFE."

This bingo-calling continues until all 29 cars are accounted for.

The switching is soon done and we're off to a flying start, helped by a boost from the switcher which has just replaced our caboose at the end of the train. Worst shoves aside a bag of company mail which the car checker left on his desk to be dropped off at Valparaiso, and immediately gets to work on his waybills and wheel report. Walters busies himself at the stove, and we see he's preparing a pot of coffee.

Less than four miles out, Engineer Haugh leans heavily on the whistle for a multitude of grade crossings, most of them protected by short-armed automatic gates, in the industrial city of Harvey. Before clearing the city, 490 runs under the Illinois Central and crosses the Baltimore & Ohio Chicago Terminal Railroad. We recall that we passed under the Rock Island's main line just before entering the yard at Blue Island. We'll intersect a lot of other lines before long, due to the peculiarity of Grand Trunk's entrance into Chicago. We must cross practically all of the other railroads which radiate out from Chicago to the west, south, and southeast.

Walters has climbed to the cupola to watch the train. Worst is still hard at his paper work. We peer out into the dark and try to identify various railroads as we cross them: the Chicago & Eastern Illinois at Thornton Junction; the Chicago, Indianapolis & Louisville; the Pennsy's Logansport Division; the Danville Division of the New York Central. We're in Indiana now, and 26 minutes after leaving Blue Island we get a green indication and roll over a maze of diamonds at Griffith. The Erie, a NYC line to Joliet, and the main line and South Chicago Division of the Elgin, Joliet & Eastern all intersect the GTW at Griffith. Junction is also made with the Chesapeake & Ohio. The C&O and EJ&E contribute freight to GTW at Griffith, but not to 490, which now picks up speed rapidly as the track stretches out and swings northeasterly through Indiana.

Between Sedley and Valparaiso our speed drops as we climb a 0.92 per cent grade on a 5½-mile single-track section which is marked, near the top, by the crossings of the Nickel Plate and the Pennsy's Fort Wayne Division. While the 6317 could handle as many as 50 cars up "Valpo Hill" without much trouble, the drag freights have to double or triple.

It is just a little past 10 when 490 swings back onto double track close to the Valparaiso station. The conductor's paper work is done now, and he heaves off the bag of company mail as we roar on without a stop and quickly accelerate to the authorized speed limit of 60 miles an hour. Passenger trains and most freights have to stop at Valparaiso to take water, but 6317's huge tank holds enough to carry it through.

Walters has come down from the cupola to stretch his legs and drink a cup of coffee. "Hungry?" he asks. We nod our heads, and he makes us a cheese sandwich and pours another cup of coffee. It's not like mother used to make, but despite its strength and heat we find it a satisfying companion to the sandwich.

Worst now climbs to his side of the cupola, and at an invitation from Walters we share his side of the observation room. The caboose swings and sways as the mile-a-minute pace continues through Haskells, Wellsboro, and Stillwell. At Haskells we cross the Michigan City Division of the Monon Route; at Wellsboro, the La Crosse Division of the Pere Marquette and the main line of the B&O; at Stillwell, the Michigan City branch of the Nickel Plate. All these crossings remind us that the Grand Trunk follows a more northerly route to the East than do other railroads out of Chicago. We have crossed 14 other lines since we left Blue Island. Luckily for 490's unofficial schedule, green lights

The Inter-City Limited crosses the tracks of the Detroit Division as it pulls into Durand, Mich., always a busy spot for freight and passenger trains alike. Here the Inter-City will drop cars for Detroit and add some for Chicago.

at all crossings have allowed it to cover 79½ miles in 85 minutes as Engineer Haugh brakes to a stop at the Olivers coal dock at 10:42. We have averaged 56 miles an hour.

Just before the stop at the coal dock, westbound manifest No. 485 pulls by on the other main with the 6329 working hard to get rolling again after a stop for coal.

Relocation of water facilities makes it possible to get coal and water at one stop, and car inspectors also give the train a quick check. Interchange is made at Olivers with the NYC and the Indiana Northern (Pennsy).

In six minutes, 490 is under way once more and soon we cross the NYC line to Niles.

The freight conductor's work begins as soon as he checks in at the yardmaster's office, where he receives his orders ↖. His caboose is fitted as an office ←. A yard engine ↙ is already at work making up his train ↙, and soon he swings aboard ↓ and the fast run of 334 miles from Chicago to Port Huron begins →.

Canadian National photos by Ken Hand.

This crossing was interlocked in May, 1946, saving six minutes' running time on passenger trains and even more on freights, since all trains previously had to make a complete stop.

Just beyond the crossing we enter 1½ miles of track used jointly with the NYC at South Bend. Until 1929, GTW had only a single track through South Bend and ran down the center of Division Street. But in 1929 the two roads joined in a grade separation project. The NYC built the joint trackage and a passenger terminal, while the GTW spent $1.8 million to elevate and double 1.3 miles of its own track and to construct three bridges over streets and a six-span steel bridge over the St. Joseph River.

Thanks to this construction work, 490 rolls through South Bend quickly. The target light is green, and Engineer Haugh eases the train across the NYC tracks and back onto GTW rails just before crossing the river. Now the tracks turn northeastward once more and very shortly 490 roars over the Indiana-Michigan border.

The 6317 rolls around a wide curve and heads upgrade out of Cassopolis, 33 minutes and 24 miles from Olivers. But Haugh jockeys the engine back into the 60-mile-an-hour mood and at 11:46 Schoolcraft is passed along with Extra 6318 West, which is picking up cars from the NYC branch linking Elkhart, Ind., and Grand Rapids, Mich.

The 490 roars through Vicksburg, where the passenger station is used jointly with the old Grand Rapids & Indiana, now a part of the Pennsy. Three more miles rush past and 6317's whistle marks the passage through Pavilion, where an 11-mile spur swings to Kalamazoo.

Climax Hill is ahead, but this is a breeze for the 6317 and its 36 loads, and the downhill run into Battle Creek is begun. Westbound trains have more difficulty, since they have to surmount a 0.57 per cent grade. A grade separation marks the highway into the Army's Fort Custer. The lights of the now almost deserted post are at the left. At the right is the Kellogg airport. Then 490 rounds a curve to the right and rushes into Battle Creek's outskirts, passes the big

Canadian National photo by Ken Hand.

Canadian National photo by Ken Hand.

The Maple Leaf ↑ swings southward through Elsdon Yard, Chicago, where the small beginnings of the manifest freights are made up. Most cars are added at Blue Island, 11 miles to the south, at the Indiana Harbor Belt Line connection.

station, bangs across the Detroit-Chicago line of the NYC and heads into Nichols Yard, which has extensive switching facilities and a big roundhouse and locomotive repair shop adjoining its southern edge. Battle Creek is an important division point, and all train and engine crews change here except for conductors, brakemen, and baggagemen on passenger trains, who cover the entire division.

It is half-past midnight when we pull into Nichols. We say good-by to Conductor Worst, and Walters escorts us to another caboose in which we'll be riding on toward Port Huron after the exchange. We never do meet the new head-end crew. The time is too short, and we don't want to be left behind. Walters turns us over to Rear-End Brakeman E. J. Carey, a former G. I. who likes his railroading but also hankers to become a printer on a daily newspaper. Conductor B. York swings aboard as we pull out and settles down to his desk work, but not before he tells us that engine 6323 is doing the work up front and that 17 cars have been added to the train.

Carey helps with the wheel report while York goes over the waybills and prepares an ice list for seven refrigerator cars which are scheduled to be dropped at Durand. This must be done in time to be dropped off to the operator at Charlotte, 31 miles from Battle Creek, who will wire the report back to the dispatcher, who in turn will inform Durand. Charlotte is passed 33 minutes after leaving Nichols Yard. It's now 2:47 a. m.; we boosted our watches to Eastern time at Battle Creek.

We climb into the cupola with York, who sticks his head out the window as the train swings to the right. "All black," he calls to Carey, who occupies the other side of the cupola. He explains to us that by "all black" he means there are no signs of a hotbox up ahead. As wayside block signals and train order boards are passed, the conductor and brakemen call out

the indications just as the engineer and fireman are doing up in the engine. "An order may come through too late to catch the engine but soon enough to notify us," he explains as we pass an order board still displaying green. The conductor can stop the train by "pulling the air" by means of a valve in the caboose.

An approach-lighted block signal on the westbound track-displays green as we pass it, and Carey knows a train is coming. He swings down from the cupola and takes up the watch on the back platform, signaling "all is well" as the westbound caboose flashes past. We look out the rear window of the cupola and catch the other brakie's signal that all's well.

It's nice riding up here in the swaying cupola as the train thunders along at 60 miles an hour. It's dark out, and raining, and there isn't much to see, but Conductor York points out lights and tells us what they represent. We pass the sprawling Oldsmobile factory at Lansing, then the passenger station and the Reo plant which spreads along the southern edge of the tracks. At the station, unloading quantities of mail and express and picking up a solid car of express for Chicago, is No. 5, the westbound *La Salle*. This is already a long train, 17 cars, but No. 5 will go into Chicago with 18 after picking up another express car at South Bend. Mail and express cars form most of the consist, but one Pullman and quite a few coaches are included. The Pullman and one coach originated in Detroit and were tacked onto No. 5 at Durand, key transfer point for the Chicago and Detroit divisions.

The New York Central's Bay City-Jackson line is crossed just east of the Lansing station. Passenger trains and some freights take coal at the eastern edge of Lansing, giving eastbound passengers an opportunity to admire the animals in the city's Potter Park zoo. But 490 speeds right past the modern coaling station and wheels over the Pere Marquette's Detroit-Grand Rapids line at Trowbridge, about three miles from Lansing. Ahead lies pretty much of a downhill ride for the 32 miles to Durand.

Extra 6314 West is at Morrice. Then, at 3:45, 490 halts just west of Oak Street in Durand. The engine cuts loose and runs down to the water plug near the big passenger station. Once more the train gets an inspection while a switch engine cuts out the seven cars of perishables which are to be iced and sent on to Detroit.

With the tank again full of water, Engineer Craig backs the 6323 onto the train. It is now 3:58, and No. 15, the *International Limited*, hurries past westbound behind 6039, picking up speed rapidly with a 10-car train (mostly Pullmans) after its momentary halt before being flagged through Durand. This train has been in service since July 1, 1900. According to *Railway Age*, No. 15 in the early '30's was the fastest long-distance train in the world with an average speed of 47½ miles an hour for the 851 miles from Montreal to Chicago.

The 6323's exhaust is full-throated as it starts 46 loads, negotiates a curve to the right and the engineer acknowledges the "proceed" signal from the yellow hand lantern of the switch tender. This signal indicates the gates are properly set for 490 to cross the tracks of the line between Detroit and Muskegon and then those of the Saginaw subdivision, a 50-mile branch running north of Durand to serve Saginaw and Bay City. The latter tracks, which swing past the eastern side of the Durand depot, also are used by the Ann Arbor Railroad.

At Flint, the Pere Marquette's Saginaw-Detroit line is crossed. Normally 490 doesn't stop at Flint, home of General Motors' Buick and Chevrolet divisions, but this morning we drop off three cars in Belsay Yards at the eastern edge of the city. The set-off takes only five minutes. Now it is a cinch for an on-time run, for only 59 miles remain and we have 75 minutes to do it in. The 6323 roars up the 0.4 per cent grade beyond Davison and the lights of Lapeer fade behind along with another NYC branch (Detroit to Mackinaw City).

It's 12 more miles to Imlay City, where the Cass City subdivision crosses. This 99-mile branch runs north from Pontiac to Caseville on Saginaw Bay, serving the rich farming area of Michigan's Thumb district (so called because on a map it resembles the thumb of a mitten). Westbound trains have to fight a 0.6 per cent hill west of Imlay City.

Capac is quickly passed and at Emmet No. 490 meets westbound manifest 495, headed by the 6331. Our watches show 5:54 as 490 shoots past the tower at Tappan, just over a mile from Tunnel Yard. Tappan is the point where the Mt. Clemens subdivision comes up from Detroit to join the Chicago Division and enter Port Huron. Then it's 6 a.m. and an on-time run has ended in Tunnel Yard.

Port Huron is the end of the line for the Grand Trunk Western. Soon 490's cars will be taken in charge by electric locomotives for a two-mile ride through the St. Clair Tunnel, which plunges under the St. Clair River and emerges at Sarnia

in Canada. There the Canadian National will take over to rush the freight eastward over the old Grand Trunk main to Toronto, Montreal, and Portland, Me., with another line curving away at Hamilton, Ont., to Niagara Falls, where connections are made with the eastern roads serving the New York and Pennsylvania areas.

The number of trains reported on the line during 490's run is typical of Chicago Division traffic. A recheck shows that 490 covered the 314 miles from Blue Island to Tunnel Yard in 7 hours 43 minutes, an average of better than 40 miles an hour. But with 66 minutes lost in taking coal and water at Olivers, changing crews and engines at Battle Creek, taking water at Durand and stopping at Flint, the actual running time was 6 hours 37 minutes, giving a surprising average of 47½ miles an hour. And 490 could have left Battle Creek as late as 2:30 a. m. and still kept the 6 a. m. date at Port Huron.

Actually, 490 and none of the other manifests have any timetable rights, since the only schedules listed in the employees' timetables are for passenger trains and mixed runs. But in 490's case the 6 a. m. arrival in Port Huron is a goal sought by train crews, dispatchers and officials with just as much zeal as if it were a published schedule. Only unusual delay in getting cars at Blue Island or a series of red targets in the Chicago area will interfere with the arrival.

Not quite as fast as 490 is No. 492, which leaves Elsdon late in the morning with freight for Toronto, Montreal, New York, Boston, Philadelphia, and Maine points and is due in Port Huron at 7:30 p. m. This train is now back on its prewar standard of operation and every effort is made to get into Port Huron on time. No. 492 makes the same stops as 490 but is limited to 55 miles per hour.

The two other eastbound manifests are No. 482, leaving Elsdon at 2 a. m., and No. 484, due out in the early afternoon, both handling New York, Boston, and Philadelphia cars. These trains handle heavier tonnage and regularly pick up and set off at Blue Island and Durand; 482 performs similar work at Olivers and Lansing and 434 stops at Olivers and Flint when necessary. Both pick up cars at Battle Creek and Durand which are moved in by extras and locals from the big traffic points along the line.

Since all of the perishable shipments are eastbound, the westbound manifest schedules do not compare with 490's performance, although creditable time is made with heavy trains.

Almost in 490's class is an interdivisional run between Chicago and Detroit which is the key factor in the Grand Trunk's unusually fast less-than-carload service. This run consists of No. 536 into Battle Creek and No. 530 between Battle Creek and Detroit. No. 536 pulls merchandise cars from the Taylor Street freight house in Chicago about 6:30 p. m. and after getting the rest of its train leaves Elsdon around 7:40 p. m., approximately 40 minutes ahead of No. 14, the eastbound *International Limited.*

Known as the "short manifest," 536 makes one stop to set out at Olivers and then races No. 14 into Battle Creek, usually winning the race by 20 to 30 minutes, arriving at Nichols Yard at 11:10 p. m. This requires an average speed of 47 miles per hour to cover 167 miles in 3½ hours. Fifty loads of merchandise make up an average train.

After a 50-minute delay, No. 530 picks up the rush merchandise for Durand, Pontiac, and Detroit. An average train is 55 cars. Motive power is either a 6000-class locomotive or a Mikado. Average speed on the run to Detroit is held to 36 miles per hour because of two stops en route plus a 45-mile speed limit imposed on freights between Durand and Detroit. Connections made with other trains at Durand and Pontiac make it possible to provide overnight service from Chicago to all major points on the entire system.

Sketched in very broad terms, the traffic movement is something like this: Iron, steel, accessories, and other materials needed by the auto plants in Detroit, Pontiac, Flint, Lansing, and South Bend flow in from connecting lines at many points on the system. However, a sizable amount of auto frames, motors, and accessories originate on the GTW from supplying plants in Milwaukee, Muskegon, Grand Rapids, Saginaw, and Bay City. In turn, the finished products of the auto industry — new cars, trucks, bodies and parts — are shipped out in all directions. This traffic requires the GTW to have 5444 automobile cars in its 12,366 pieces of freight equipment.

Coal comes in principally from the Detroit & Toledo Shore Line (which GTW owns jointly with the Nickel Plate) and spreads out over the system. Chicago contributes perishables from western connections, fresh meat from the packing plants, and a flood of merchandise from mail order houses and wholesale agencies destined for all points on the line and on into Canada and eastern United States.

Across the lake from Milwaukee the car ferries bring meat, grains, dairy products, and

auto frames and return with coal, newsprint, and the products of the auto industry. The newsprint comes from Canada. Lumber is received from southern and western connections. Considerable bulk gasoline and oil is originated along the Greenville subdivision, breakfast foods pour out of Battle Creek's factories, and gravel and sand originate in quantities at Muskegon and Oxford (Cass City subdivision). Salt is shipped out from the Port Huron area. Farms and factories along the line contribute an almost endless variety of commodities.

But don't be misled into thinking the Grand Trunk Western is only a freight line. Back in 1945 the line handled 1,561,785 passengers, and the $4,598,918 received from passenger traffic was 12 per cent of total revenue. Air-conditioned cars comprise the bulk of the passenger equipment. Fifty-one of the 60 coaches are air conditioned, as are two parlor cars, three parlor buffet cars and four of the five diners. The rest of the 128 passenger train units are combination cars, baggage, mail, and box express cars, two business, two instruction, and one motor car.

Keeping motive power and equipment in spic-and-span shape is a GTW tradition. The road has 152 steam locomotives and 31 Diesels, some of which are on lease to the Canadian National. All of the Diesels are switchers but were pressed into service during the coal strike to keep passenger service running between Detroit and Muskegon. Now one of them has been assigned to the Saginaw subdivision. Dieselization of 490 is in the offing.

The history of the Grand Trunk Western goes back to 1830, when a charter was issued to the Pontiac & Detroit Railroad, first in the Northwest Territory. Construction began in 1834. The name was changed to Detroit & Milwaukee Railway Company and in 1858 track had been built across Michigan to Grand Haven. After financial difficulties the Great Western of Canada took over the line and reorganized it as the Detroit, Grand Haven & Milwaukee.

The Grand Trunk of Canada had reached Sarnia, Ont., in 1859 to complete an 800-mile route from Portland, Me. Affiliates of the GT then built the 57-mile Chicago, Detroit & Canada Grand Trunk Junction Railway between Port Huron and Detroit. This gave the Grand Trunk entrance into Detroit and ultimately rights were obtained to run to Chicago over the Michigan Central.

When the Vanderbilt interests acquired the Michigan Central, they closed the Chicago doorway, but an alternate route was available due to financial troubles of the Chicago & Lake Huron Railroad, which had lines extending from Port Huron to Flint and from Lansing to Valparaiso. The Chicago & Northeastern Railroad built a line to close the gap between Flint and Lansing. The Grand Trunk took over these railroads and during the process extended the rails from Valparaiso to Elsdon. A lease on the Grand Trunk Junction Railway gave access to the Chicago & Western Indiana for entry into downtown Chicago.

Other acquisitions followed. Then, in 1923, the Canadian National took over the Grand Trunk of Canada but the units in Michigan, Indiana, and Illinois continued their separate identity although operated as one unit. The corporate structure was greatly simplified in 1929 when most of the lines were merged into the Grand Trunk Western Railroad Company.

Canadian National photo by Ken Hand.

Train 490 has recently made trial runs behind an Electro-Motive F-3, but at present all road engines owned by Grand Trunk operate by steam→.

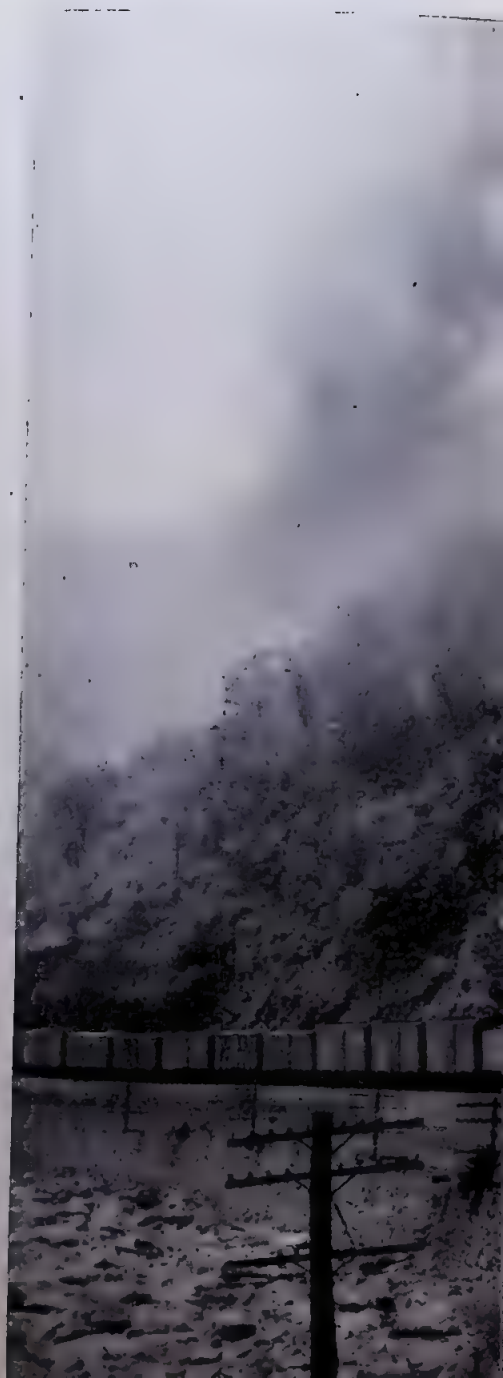
Heart of the Lehigh Valley

The Wyoming Division, bristling with coal feeders, is a line of scenic grandeur through a region of great industrial intensity

BY W. R. OSBORNE

Heart of the Lehigh Valley Railroad is its Wyoming Division, connecting link between the 178-mile Buffalo Division to the west and the 119-mile New York Division to the east. The Wyoming's main line is a 150-mile double-track boulevard of steel extending south and east from Athens, Pa. (two miles south of Sayre) to Lehighton, Pa. (30 miles north and west of Bethlehem, where the home office of the railroad is located). The western portion of the division lies in the beautiful valley of the North Branch of the Susquehanna River, while the eastern end hurdles the mountains that tower more than 1200 feet above Wyoming Valley and then parallels the Lehigh River down the eastern slope toward the Delaware.

The Wyoming Valley, from which the division takes its name, is a mountain rimmed oval bowl which the railroad crosses midway between division terminals. This concentrated mining area is a tangle of coal breakers, railroads, large and small cities, rivers and highways, all supported on much-burrowed earth. Scranton, east of the Lehigh Valley tracks, is the largest of the Wyoming cities, then come Wilkes-Barre and Pittston, both on the line. The Erie, Lackawanna, Lehigh Valley and Central of New Jersey all hurdle the south rim to reach this rich anthracite region. Railroad interest in the valley includes such scenes as the comparatively level running lines lengthwise along the Susquehanna; twisting, heavy mountain climbing to the top of Penobscot Mountain on the south rim; thundering action of freight trains sandwiched between huge steam locomotives at the head end and 5400-horsepower Diesel pushers at the rear; the Ashley planes of the Central Railroad of New Jersey by which freight cars are pulled up 1000 feet in three miles by cable; the electric Laurel Line (Lackawanna & Wyoming Valley Railroad); a Pennsylvania Railroad line; and a Delaware & Hudson freight line. From the Lehigh Valley at the top of Pe-

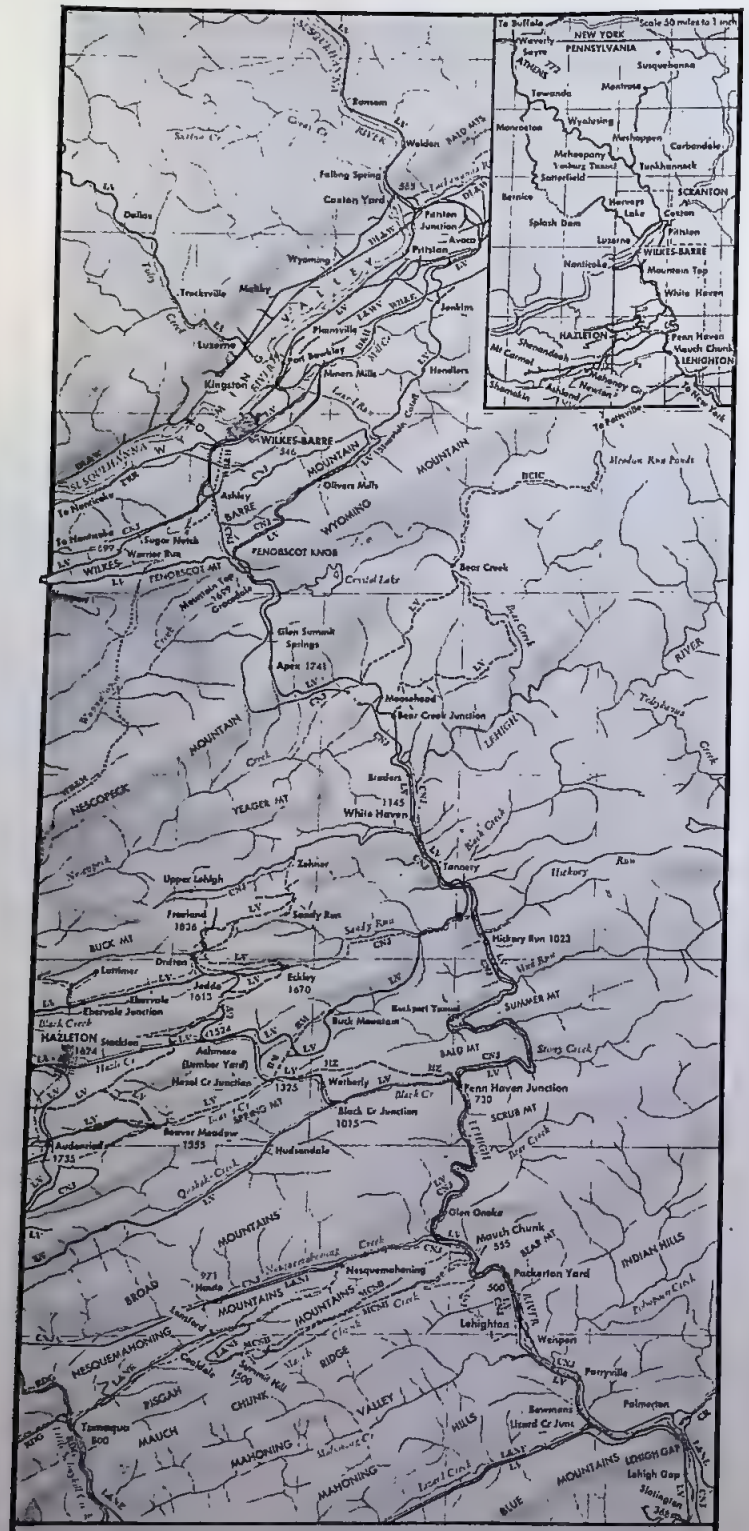


A westbound Lehigh Valley freight winds around Oxbow Curve a few miles south of Penn Haven Junction with two locomotives at the head end and pushers at rear. Low level tracks are Central of New Jersey.

nobscot Mountain the passenger can view one of the most breath-taking panoramas in the eastern United States, looking down upon the valley far below with its broad river and countless communities. Upward from the valley floor sweep forest land and cultivated fields, dotted with culm banks from the great coal mines which underlie the entire surrounding country. The Lehigh Valley is widely acclaimed as a railroad of scenic grandeur, and a large part of it is found in the Wilkes-Barre area and in the valley of the Lehigh River.

The Wyoming Division's historical background is also of unusual interest. Back in 1846 a little railroad with a big name — the Delaware, Lehigh, Schuylkill & Susquehanna, 46 miles long — was planned to facilitate the transportation of coal southeastward from Mauch Chunk, Pa., to Easton. Anthracite at that time was moved down the river in canal boats. The road was not

Wayne Brumbaugh, 858 Huntington Ave., Boston, Mass.



Wyoming Division of the Lehigh Valley Railroad

Scale 12 miles to 1 inch
Map by Linn H. Weikert

The Wyoming Division follows the Susquehanna River ↖, then hurdles the mountains to follow the Lehigh.

Wayne Brunbau

The Lehigh River valley is the most advantageous natural route to the anthracite regions of Pennsylvania. Both the Lehigh Valley Railroad and the Central Railroad of New Jersey make use of its water level grades. ↑ Westbound Lehigh Valley freight between Mauch Chunk and Penn Haven Junction. CNJ tracks to left, marked by wires.

W. R. Osborne, 216 W. State St., Trenton 8, N. J.

↑ Eastbound out of Coxton, the Asa Packer's streamlined K-3 No. 2024 plays second fiddle to a conventional K-5, No. 2101. ↗ West end of the Mountain Cutoff at Coxton. Freight occupies cutoff tracks; passenger line continues to right.

actually in operation until 1851, and two years later its cumbersome name was changed to the present Lehigh Valley Railroad. Earlier, back in 1836, a railroad known as the Beaver Meadow had built east from Beaver Meadow to Penn Haven Junction, then south to Parryville. The rapidly expanding Lehigh Valley acquired this line in 1864. That same year it also purchased the Penn Haven & White Haven Railroad, and in 1865 extended its line north over the mountains of eastern Pennsylvania to prolific Wyoming Valley. By late 1867 the railroad reached as far north as Waverly, N. Y., thus completing all that portion in which lies the present main line of the Wyoming Division.

Today, the Lehigh Valley extends from the Great Lakes to the Atlantic Seaboard, with numerous branches tapping the immense anthracite fields of Pennsylvania and other industrial and fertile agricultural sections in New York, Pennsylvania, and New Jersey. It originates millions of tons of anthracite, the principal commodity hauled and the very thing from which the railroad takes its slogan, "the route of the black diamond." One of its trains is known as the *Black Diamond.*

Wyoming Division crews operate out of Sayre

M. H. Cooke, 9 Grant Ave., Jersey City, N J.

W. R. Osborne.

at the west end. Here are the main shops of the company, which not only repair but rebuild and even build motive power. The 42-stall roundhouse dispatches from 60 to 70 engines each day to the Buffalo and Wyoming divisions.

From Athens to Coxton the line is seldom more than a stone's throw from the banks of the Susquehanna. Common with river routes, the grade is light, averaging 0.06 per cent (slightly more than three feet per mile), and while the road is winding, engineering skill has made it both smooth and safe for high speeds. Most curves are long, one being nearly two miles in length; none are objectionably sharp. It is along this section that the blue ribbon manifests, many with upwards of 90 cars, turn in some spectacular performances, not infrequently covering the 84 downgrade miles between Sayre and Coxton in approximately two hours.

To the traveler the west end of the division is an ever-changing vista of placid river waters punctuated with towering rock cliffs and sweeps of rolling farmland. The old, historic, picturesque towns along this section nearly all bear intriguing Indian names such as Wyalusing, Meshoppen, Mehoopany, and Tunkhannock.

Coxton, near Pittston, is the beehive of the

↓ With tender booster cut in an R-1 pushes a cut of hoppers over the hump at Coxton while a 2-8-2 arrives with a long string of "black diamonds" from near-by mines. ↙ A freight train leaves Coxton, eastbound on the Mountain Cutoff line.

W. R. Osborne.

↑ No. 5211 storms up the final stretch of the Mountain Cutoff to parallel the passenger tracks from Mountain Top to Gracedale, where they join. Mountain Top station at left; passenger line in foreground. ← Coaling station at Towanda.

Both photos, W. R. Osborne.

division, with a 30-stall enginehouse, a modern hump yard with car retarders, and facilities to service the giant four unit Diesels used in pusher service. Coxton dispatches 65 engines per day and classifies hundreds of cars for eastbound and westbound movements. The yard has a capacity of 3600 cars.

Just south of Coxton the main line divides. The old original route, still used by passenger trains, swings southwest and west down the Wyoming Valley nine miles to Wilkes-Barre, principal city on the division. It is also division headquarters. South and west of Wilkes-Barre, at Warrior Run, the line climbs a 1.81 per cent grade, continuing two miles west, then doubling sharply back another six miles to the summit of Penobscot Mountain at Mountain Top, more than 1700 feet above sea level.

The freight route from Coxton, known as the Mountain Cutoff, is one of the most important

No. 5108 passes Glen Summit Springs with a westbound freight on the 11-mile three-track section on the eastern slope →. Double-headed ore train ↘ works east past piles of coal tailings near Mt. Carmel at the end of a branch track.

sections of the division. Constructed in 1887 and 1888, this 20½ mile double-tracked road with its lower grade provides a more favorable route for the heavy eastbound freight movements and reduces the distance by some 6½ miles as compared with the passenger or "back-track" route through Wilkes-Barre. On the cutoff the operation is spectacular plus. It is not uncommon to see 5000-ton trains rolling along at 15 miles per hour with one Wyoming type engine (4-8-4) on the head end, assisted by one 5400-horsepower streamlined Diesel pusher. Day and night a steady procession of coal and refrigerator cars is flung over this mountain line.

Like the rest of the main line, the cutoff has 131- and 136-pound rail. While the western end of the division is equipped exclusively with automatic three-position upper quadrant semaphores, some of the signals on the cutoff are of the position light type. Semaphores are used on the passenger route up the mountains, while the eastern end of the division has, in addition to these types, some signals of the color light variety. The entire main line is protected with automatic train control of the intermittent type. Dispatching is by telephone.

The Mountain Cutoff joins the passenger line at Gracedale, near Mountain Top station. Three tracks are used from Gracedale south to Braders, 11 miles. From Apex, just south of Glen Summit Springs, the line descends on a 1.23 per cent slope for a distance of nine miles.

Continuing down the eastern slope, the road passes through White Haven, famous health resort, and follows the east bank of the tumbling Lehigh River. Nine miles south of White Haven is Rockport Tunnel, which, although short (1198 feet), avoids a circuitous route around a bend in the river. At Penn Haven Junction the Hazleton branch diverges to tap the huge coal deposits surrounding Hazleton, highest city in the Keystone State. At the junction the main line bridges the river and crosses the tracks of the Central Railroad of New Jersey.

The line threads its way along the banks of the Lehigh River and passes through a country

Second No. 9 (the Black Diamond) climbs westbound near White Haven behind two Class K-3 Pacifics ↗. The westbound grade between White Haven and Mountain Top requires lots of power on freights. Here two pushers assist →.

Second from top; Robert R. Malinoski; others, W. R. Osborne.

of wild and primitive beauty. Frowning walls of rock echo the blasting exhausts of engines as they battle to the top with heavy westbound freights. Double-headers and twin pushers are a frequent sight. Heavy passenger trains are double headed.

The eastern end of the mountain grade is 1.19 per cent. Long sweeping curves are numerous; rarely is the rear of a lengthy freight train visible from the head end as it snakes its way down the valley. The sharpest curve on the road is just east of Mauch Chunk, "the Switzerland of America." Coming as a climax to the line to the west, this 13-degree curve leads to one more river crossing and eastern terminus of the division, Packerton Yard, Lehighton.

Packerton has an enginehouse with 14 stalls. From this terminal 47 engines are dispatched each day, and its yards will hold 3400 cars.

Traversing a country with a wealth of early American history, the Wyoming Division includes 409 miles of first track and 214 miles of second track and has more than 50 branches. It is served by five engine terminals that dispatch more than 170 locomotives each day and by five major yards having a total capacity of 9350 cars. It operates 11 mainline passenger trains, 12 branch line trains, and a multitude of fast symbol freight trains and mile-long coal drags. It serves busy collieries, roaring coal breakers, great industrial plants, dairy farms, enterprising communities, and lazy villages.

↖ (1) Heavy motor car and two trailers roll up main line west of Mauch Chunk en route from Lehighton to Hazleton. Some Hazleton locals are steam powered. ↖ (2) Bedecked in centennial regalia, the westbound Black Diamond Express passes through Falls. ↖ (3) Two milk cars and caboose follow No. 1152 through Towanda, westbound. ← Vosburg Tunnel, longest on the Wyoming Division (3903 feet) is 59 miles eastward from Sayre. Only the Musconetcong Tunnel on the New York Division is longer on the entire railroad. Vosburg Tunnel is sometimes flooded [Aug. '46 Trains]. ↓ The bridge across the Susquehanna at Towanda includes an S curve.

All photos, W. R. Osborne.

W. R. Osborne.

↑ Swinging around the curve at Falls, No. 5213 hurries down the slight grade on the Sayre-Coxton portion of the Wyoming Division with a 78-car symbol freight. ↓ The Packerton engine terminal at the east end of the Wyoming Division dispatches 47 locomotives a day from its 14-stall roundhouse. Packerton Yard extends more than a mile north from Lehighton.

W. R. Osborne.

See page 38.

Incident at Garnet

PHOTOS BY W. H. THRALL JR.

The little desert village of Garnet, 680 feet above the sea and 112 miles east of Los Angeles on the Southern Pacific's Sunset Route, is an oasis in Coachella Valley. Its two business houses (a restaurant-and-service station and a service station-and-restaurant), about a mile north of the railroad station, serve auto tourists and a population of about 100. But to the railroad traveler the town is merely a council of a dozen or so tamarisk trees surrounding a water tank and spout, some section houses and a little yellow depot and telegraph office. Here all westbound trains stop to pick up another engine to help them climb a 25-mile hill to Beaumont at the top of San Gorgonio Pass, 2559 feet above sea level.

Operations at helper stations are always interesting, and Garnet is no exception. Back in 1940, the westbound *Sunset Limited* met its eastbound companion at Garnet shortly after noon to arrive in Los Angeles at 4:30 p. m. instead of at 9:25 a. m. as it does now. These pictures show the meet operations. With Garnet station in the background, helper 5016 couples onto No. 1, the westbound *Sunset Limited* ↖ (1), which then pulls ahead ↖ (2) (see preceding page showing business car at rear and snowy Mt. San Jacinto in distance) to the west entrance of the passing siding and comes to a stop. The head-end flagman runs forward, while the conductor watches impatiently ↑ for arrival of No. 2, the eastbound *Sunset* ←. No. 1 holds the main because westbound trains are superior to eastbound trains of the same class. Nowadays throwing switches is eliminated because this section of the line is now under centralized traffic control.

Harold M. Lambert.

Along the Reading

Result of one of the temporary wartime dislocations of traffic is this solid train of oil cars on the Reading, dean of hard coal roads. Oil traffic handled by the Reading lines multiplied by five during the war.

McKay.

Branch Line With a Future

Revivified branch of the Northern Pacific transports lumber, cattle, and sugar beets to mainline junction at Missoula

ARTICLE AND PHOTOS BY ED GRAF

Only carload freight is handled on the Bitter Root branch of the Northern Pacific Railway, running 65 miles almost due south from Missoula to Darby, Mont., to serve a territory producing sugar beets, grain, garden produce, livestock, and lumber. It receives ladings of livestock and ore concentrates from as far as 80 miles from the end of the line.

Back in 1934, in the middle of the depression, the railroad substituted highway bus and truck service to handle passengers, mail, express, and l. c. l. shipments. For several years operations languished to tri-weekly carload trains punctuated by seasonal spurts which sometimes required daily trains of 60 cars to handle sugar beets en route from the fields to a sugar factory at Missoula. Motive power was the oldest on the Rocky Mountain Division, Class S-4 4-6-0's which had been assigned to this branch after retiring from passenger service on the main line. In the early '80's, when the Northern Pacific had just completed its line to the West Coast, these engines handled such crack trains as the predecessor of the *North Coast Limited.*

Before the war, rumors fore-

Near downtown Missoula, Bitter Root branch trains cross the Clark Fork of the Columbia River ↑. The Como Peaks look down on the railroad near Darby ↖. In recent years carload after carload of logs ↙ have been shipped from Darby to mills at Missoula and Bonner. Southbound trains working Lolo grade → don't find the going too tough, for most cars are empties ↘.

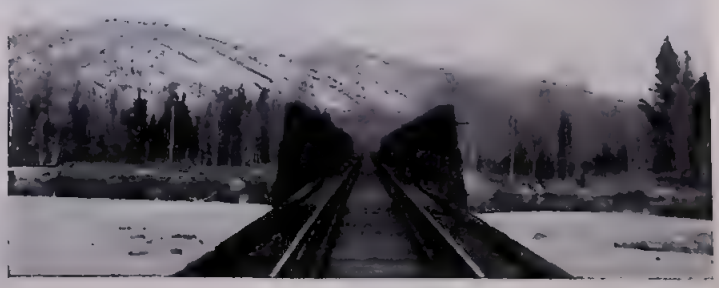
cast the abandonment of the 14 miles between Grantsdale and Darby. But the war changed that. Harper Bros. began logging on a large scale to the south of Darby to meet the increased demand for lumber, and solid log trains of 50 cars soon were traveling north to the Bonner mill just east of Missoula on the main line. Traffic on the branch became so heavy that even in the spring and summer seasons, usually slack periods, the tri-weekly trains proved too long and too heavy for the Class S-4's. Only the tremendous demands of war traffic and the consequent need of all available motive power has saved them from the scrap pile. Now, during the

Hard luck hit the Bitter Root branch on June 20, 1943, when flood waters of the Bitter Root River washed out Kenspur bridge ↑ under a logging train, dumping the locomotive and seven cars into eight feet of water. As a wrecking crane was lifting the submerged span back into position the rapid current pushed against it with such force that the excess load caused the crane to topple on top of the locomotive and

autumn harvest months or any other period of heavy traffic, Class W-3 2-8-2's are used. Some of the heavy shipments of logs, grain, and livestock during and since the war have made constant jams almost every month of the year.

In consequence of the branch's new importance, rails and bridges have been kept in a condition almost rivaling that of the main line, and stations and other structures gleam with new paint. Among recent improvements at Darby are a new loading ramp to facilitate the handling of ore concentrates which are brought over the range from Idaho for shipment east, and new stockyards

cars ←. A second crane was put to work ↙ and wooden piles were driven through the bridgework to prevent a recurrence of the second accident when the span was again raised. Locomotive 1356 looked ready for the scrap heap when finally pulled out of the river weeks later →, but she was rebuilt and put into service looking like new ↑. First train over the repaired bridge ↘ ran July 8, 18 days after washout.



which include a timbered area to provide shelter for livestock awaiting shipment. These improvements were made in November, 1944, and the first month of operation of the stockyards saw nearly 100 carloads of livestock going through Darby. Much of the stock is brought over the continental divide from Lemhi County in Idaho. Some cattle are trailed 80 miles from Salmon to Darby; others are brought by truck. Bitter Root beef and dairy cattle are considered prime.

As on most of the Rocky Mountain branches of the NP, the greater part of carload traffic on the Bitter Root branch travels mostly downgrade from

Darby to Missoula, while most of the runs from Missoula to the south are made with long strings of empties and a few cars of oil, gasoline, and miscellaneous bulk items that cannot be handled by the highway subsidiary. The first four miles of the line, between Missoula and Post, are a very busy stretch with many industrial sidings serving large wholesale warehouses, sawmills, a flour mill, and Fort Missoula, to which carloads of coal and general merchandise are consigned weekly.

Almost every mile of the Bitter Root branch has its scenic attractions, even the first few miles within the city limits of

Truckloads of sugar beets are dumped into the conveyor ↑ which loads cars at Bass siding, where locomotive 1522 is busy doing switching operations ↗. An all-timber truss ↖, part of the original structure, is retained in the bridge across the Bitter Root River near Fort Missoula. ← Locomotive 1595 southbound at Stevensville one cold November morning. A Darby-bound train breaks the silence on Lolo grade →.

Missoula. Steep grades and twisting rails are featured by the Lolo grade nine miles out of Missoula and by the last 12 miles of line between Grantsdale and Darby, where the tracks are laid on the bank of crystal clear Bitter Root River on which hundreds of wild ducks and geese settle. Overhead are lofty mountains and the snow-capped Trappers and Lolo peaks. Between Bass and Grantsdale are acres of waving golden grain, interspersed with hay and pasture lands. Elsewhere are fields of sugar beets, potatoes, lettuce, and all sorts of vegetables.

Passenger travel on the railroad in recent years has been confined to special trains of prisoners of war en route from Fort Missoula to harvest duty in the sugar beet and potato fields. Today the tourist must travel by bus to reach such vacation spots as the famous Ford & Hollister dude ranch. This mountainous land is filled with countless deer, elk, and other game, and the fishing in the river is excellent.

Illinois Short Line

BY LUCIUS BEEBE

From Hooppole, Ill., to Tampico by way of Yorktown and Aliceville stretches 12.7 miles of track almost always hidden by trees and tall grasses, and the single engine and lone caboose of the Hooppole, Yorktown & Tampico railroad can make it down and back in a single day without undue haste or exertion. The *Grapevine Express,* as it is locally known, is in many ways the answer to a mother's prayer, as the small fry of the community ride it for free by special dispensation of the I. C. C., and harassed housewives in Hooppole are forever discovering they need a spool of thread available only in Tampico, and vice versa. The ancient engine which pants gently across the Illinois cornfields and is never turned was built in 1887 for the Burlington as a Class F, an 0-6-0 type. It was later acquired by the St. Joseph & Council Bluffs, and in 1904 was returned to the Burlington. There it remained until 1927, when the Hooppole bought it. The HY&T is also sometimes known as "the dummy train," and most of its revenue freight (which totaled $10,079 in 1944) consists of grain and lumber. Seasonal operations problem is most acute in midsummer when weeds are tallest, often making a sickle necessary as part of the conductor's equipment along with fusees, signal flags, and brake clubs.

Connection is made with the Burlington's Mendota-Denrock-Clinton branch at Tampico, which sees two "Q" passenger trains daily at 7:53 a.m. eastbound, 7:53 p.m. westbound

Photos by Lucius Beebe and Charles M. Clegg from their forthcoming book, "Mixed Train Daily, a Book of Short Line Railroads," which E. P. Dutton will publish this fall.

Hooppole, Yorktown & Tampico Railroad pays taxes to three counties: Henry, in which Hooppole is located, Bureau, and Whiteside. Yorktown is in Bureau County and Tampico is in Whiteside. Engine 1315 ↖ and the weather-beaten caboose ↑ fight their way over the weed-grown right of way which parallels a country road at Hooppole and is surrounded by fields of Illinois corn. The imposing edifice at Hooppole → serves as depot, freight office, and general business premises of the line. At Tampico the HY&T uses the Burlington depot. Country between the terminals is flat, and 59-year-old No. 1315 has no trouble handling all the cars delivered to it by the Burlington. Total population of all towns on the HY&T is about 1000.

A. C. F.'s First Postwar Train

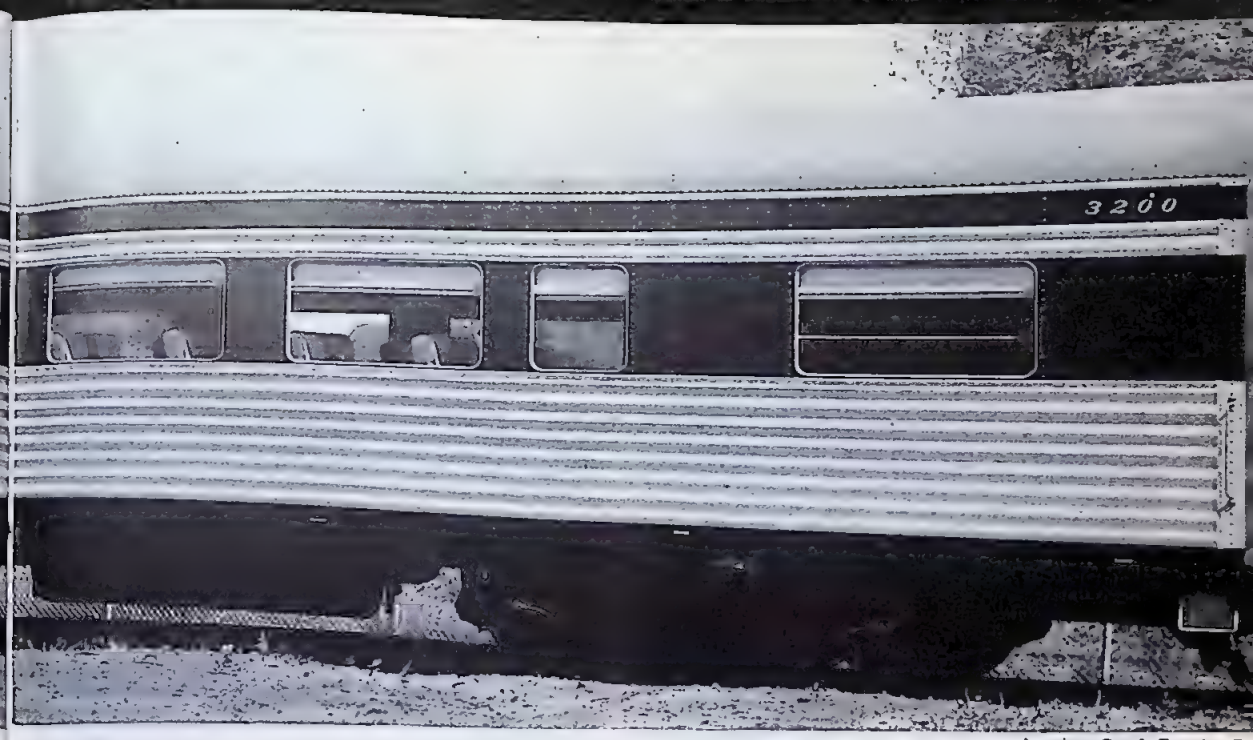
Louisville & Nashville's new Georgian and Humming Bird streamliners are last word in design and luxurious appointments

No one is any more pleased with the American Car & Foundry Company's first postwar train than is Will Rolling. Affable Will has been with the Louisville & Nashville for more than 40 years and has held various jobs in the dining car service on that railroad. The new train is the first L&N streamliner, the *Georgian,* which operates from St. Louis to Atlanta on a daytime schedule. It runs over NC&StL tracks from Nashville to the Georgia capital.

Will is the new train's chef. His enthusiasm for the new streamliner can be understood by anyone who has had the opportunity to visit his new kitchen. The plan is not much different from older dining cars, but every detail has been improved considerably by modern design. All exposed surfaces are silky stainless steel, easily cleaned with disposable paper towels. Many fixtures are on hinges to facilitate cleaning behind them. Even the air is filtered and sterilized, and is blown at a breezy rate through the compact little room. Two fold-away basins, one in the waiters' pantry and one in the kitchen itself, make cleanliness a natural.

Nor is that all. Triple sinks are provided complete with electric dish washers and glass washers, the latter arranged for bacterial treatment of all drinking glasses. Mechanical, water ice, and dry ice refrigeration are provided for the keeping of foods and fruits, each type of food being assigned to the particular type of refrigeration to which it is best suited.

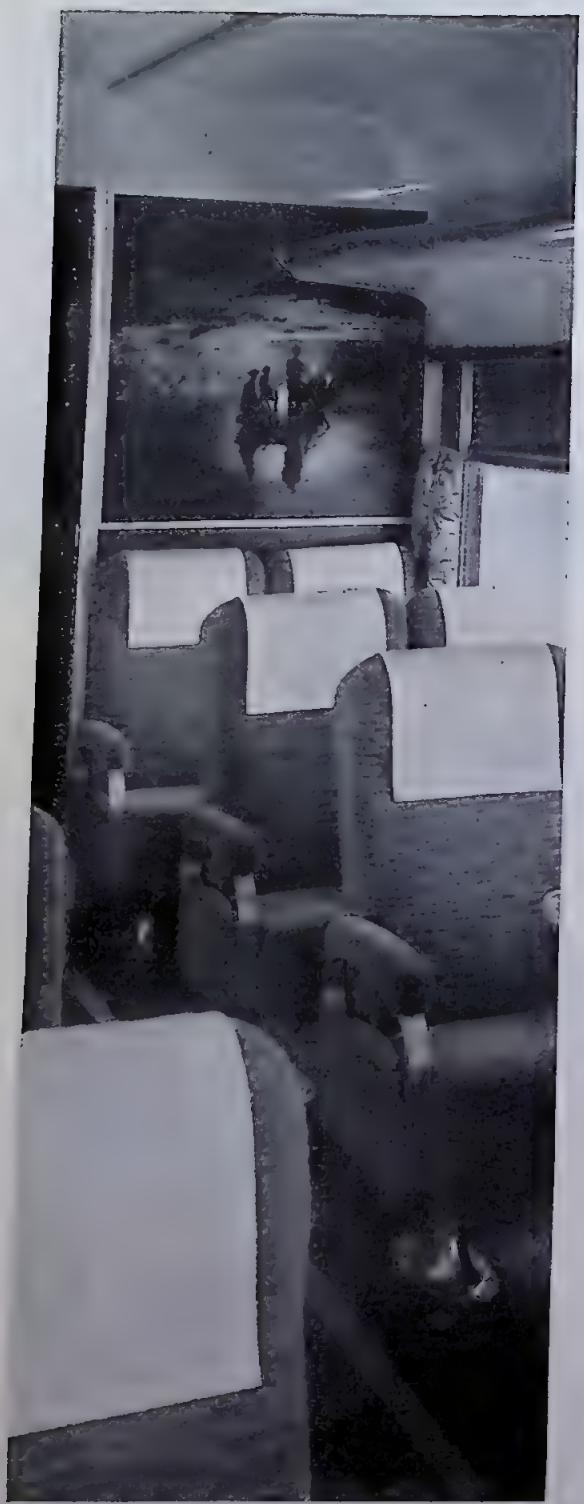
These details show the degree of perfection which modern design has brought not only to the kitchen but throughout the diner and every other car of this first postwar A. C. F. train, which is one of the four ordered by the L&N. Two, known as the *Georgians,* now pass each other daily on the St. Louis-Atlanta run. The others, the *Humming Birds,* alternate on an interesting schedule between Cincinnati and New Orleans. Both twin trains were named in a



American Car & Foundry Co.

↑ Five-foot windows are prominent features of all cars in the Humming Bird and Georgian trains which Louisville & Nashville recently placed in service. ↓ Coach interiors are given a homey touch by drapes between windows. Folding armrests between seats are just the thing to keep that draping passenger in his own territory. Notice loud speaker above door.

L&N Employes' Magazine.



American Car & Foundry Co.

Mammoth Cave in Kentucky is one of the interesting spots in L&N territory, and the photo mural at one end of this coach features a boat ride through the cave. Murals decorate panels at both ends of every coach on the trains.

contest in which more than 292,000 train names were submitted.

The dining room seats 48 passengers at 12 tables arranged at wide windows. Partitions at each end of the dining room have full-length plate-glass mirrors. Tables snap into sockets in the floor and wall, and can be removed and folded away. The color scheme is built around harmonious shades of reds and browns, with fawn colored upholstery and dark maroon carpeting, all blending into ivory walls and ceiling, with a light gray beamed ceiling set off by cocoa drapes at the sides of each window. The beamed ceiling terminates in winged partitions at each end and conceals loud speakers for the radio and announcement system which is operative in all seven cars of the train.

Other cars in the train are four de luxe coaches, one partition coach and a tavern-lounge car. No passenger can fail to appreciate the five-foot windows in every coach, the shades of which can be raised or lowered easily from either end or anywhere along the aluminum bottom strips. Self-emptying ash receptacles are to be found beside each pair of the 60 individual reclining and revolving seats, and high-speed air conditioning quickly removes tobacco smoke. Besides ample illumination from ceiling fixtures, individually controlled fluorescent lights are recessed into the lower portion of the roomy luggage racks above each seat. Large lounge rooms for men and for women are provided at the ends of the cars.

On the partitions at each end of the passenger compartment are photo murals of points of interest along the L&N, each identified, set off by an aluminum border molding.

As in the diner, shades of colors have been used in the interior decorative scheme, resulting in a restful atmosphere which enhances travel.

The L&N being a southern railroad, a partition coach which seats 58 passengers is provided. Ten seats are arranged as a colored lounge section complete with individual lounge chairs, console radio, reading lamp, and magazine rack. This lounge is set apart from the remainder of the car by a neatly designed aluminum grille. Appointments and color schemes are a counterpart of the de luxe coaches.

The tavern-lounge car is arranged in two sections, the lounge seating 28 passengers and the tavern seating 24. The curved bar is complete in every detail. At the tavern end of the car are men's and women's washrooms, together with lockers and a train conductor's

office which also houses the loud speaker and amplifier system controls. The tavern section, which is separated from the bar area by a figured etched glass partition, includes four built-in horseshoe shaped seats, upholstered in brown leather, at each end, with comfortable seats arranged for four passengers around tables on each side of the car.

The lounge section is divided by glass partitions to form three intimate groupings in place of the customary single large lounge. Furnishings include two-place sofas as well as deep and comfortable lounge chairs.

All cars embody the same basic shell construction. Framing materials are aluminum alloys for all members except the bolsters, crossbearers and end sills, which are of low alloy high tensile steel, and the integral buffer castings, which are of unit cast steel. Special extruded alloy sections are used for many of the members, their straightness and uniformity aiding in the side and roof construction. Units are joined by riveting and welding. Sides and roof are assembled in jigs before application to the car structure.

The exterior color scheme is deep blue with anodized aluminum side sheets and another anodized aluminum strip between window tops and the letterboard. Color schemes and other design elements are the work of A. C. F.'s art staff under the direction of Otto Kuhler.

Brakes throughout the train are Westinghouse H. S. C. electro-pneumatic type with D-22 control valves and speed governor control which functions through a small generator in the journal housing connected by a spline bushing to the end of one axle per car. Impulses activate a series of relays which are electrically energized to reduce brake cylinder pressures in proportion to train speeds, whether in forward or reverse motion. This results in more gradual and smoother brake applications. Decelostat equipment is also provided to prevent actual wheel sliding, by providing a momentary reduction in cylinder pressure when sliding impends. This avoids the reduction in retardative effort that would otherwise occur and prevents flat wheels.

The four trains, which were completed in November, are now making their daily runs behind streamlined Diesel locomotives. The *Georgian* makes its 611.6 mile run in 12 hours 52 minutes to average about 48 miles per hour. The *Humming Bird,* covering 922 miles in 19 hours, makes a similar average.

American Car & Foundry Co.

The attractive vestibules on the new Georgian and Humming Bird trains feature folding steps, shown here in the down position. When the train is in motion the folded steps conform to the streamlined contour of the car.

To New Orleans Via L&N

Nine miles of trestles over Gulf Coast bays are an interesting feature of a trip on the famous Pan-American from Cincinnati

BY ROY G. CLARK

The sign at Gate 6 in beautiful Cincinnati Union Station says simply "The *Pan-American,*" implying that to say more would be as superfluous as explaining the meaning of U. S. A. The 24 years' continuous operation of this fine train by the Louisville & Nashville Railroad has, indeed, made its name a byword to everyone who travels. Just to say the *Pan-American* is enough.

Let's go down to the train shed and take a look at the fine fast train that will carry us to fabulous and glamorous New Orleans. Up ahead the two unit Diesel-electric locomotive is humming easily, its 4000 horses murmuring idly as it awaits the signal. No. 452 is on the job today and she's capable of handling heavy work.

For it's a long and heavy train. As we walk back to our Pullman we count 1 mail car, 1 baggage car, 7 coaches (how folks do travel these days!), 1 dining car and 3 Pullmans—13 cars in all. Two of the Pullmans go through to New Orleans; one will be dropped at Nashville.

While we're waiting for the "all aboard," let's take a look at the route over which we're going to travel. We'll be on L&N rails all the way, with the exception of the Cincinnati Union Depot tracks and the elevated trestle tracks leading to the Ohio River bridge, the latter owned by the Chesapeake & Ohio.

The 922 miles to New Orleans are protected by automatic block signals all of the way, with 209 miles of the distance double-tracked. In addition, automatic train stop control, with signal-light indications in the locomotive cabs, is in use on the 140-mile stretch between Mobile and New Orleans, a mighty busy piece of railroad. Centralized traffic control is installed between Brentwood, Tenn., and Athens, Ala., 93 miles, and between Montgomery and Mobile, 172 miles. It looks as if the L&N has done about everything to make our trip pleasant and safe.

It's 9 a. m. now and we go out on the car platform just in time to see the skipper give the high sign. The big Diesel walks our 13 cars out of the train shed like a three-car suburban train; we swing to the left on the trestle along the north bank of the Ohio River, swing right again as we cross the bridge, and in nine minutes we are in the land of My Old Kentucky Home at Covington. It's only 8:09 over here because we've gone back to Central time.

Then out through Latonia, where the bang-

The Humming Bird, L&N's new Cincinnati-New Orleans streamliner, crosses Biloxi Bay. Train is described on page 48.

tails run and where the double-tracked L&N line to Corbin, the Kentucky coal fields, Knoxville and Atlanta swings off to the south. Now our Diesel will have to show its stuff because the 114 miles to Louisville are through the rugged foothills of the Ohio River valley. It does a pretty good job of it, too, considering the terrain, for we back into the Louisville station at exactly 11:15 a. m., averaging a bit better than 35 m. p. h. over a difficult piece of railroad.

We have 15 minutes to stretch our legs here, incidentally learning that the L&N has over 10,000 employees in Louisville alone, in its general office and main shops. Promptly at 11:30 we're away on the double-tracked line to Elizabethtown and Bowling Green. The track straightens out now and we begin to roll. We arrive at Bowling Green at 2 p. m., having covered the 114 miles from Louisville at an average speed of 45.6 m. p. h.

Four miles south of Bowling Green we pass Memphis Junction, where the heavy-duty Memphis Division branches off to the southwest. The Memphis section of the *Pan-American,* which left Bowling Green 10 minutes after we did, will roar through here in a few minutes. With its New York-to-Memphis Pullmans, it is the Pennsylvania-L&N bid for the lucrative Memphis traffic.

In another half hour we're in Tennessee and at 3:41 we cross the Cumberland River at Nashville, admire the classic Doric columns of the state capitol to the left and pull into the Union Station at 3:43. We have a 12 minute service stop here while the New York Pullman is cut out and our train is watered. Nashville is an important point for the L&N, but even more important for its affiliate, the Nashville, Chattanooga & St. Louis, whose general offices and shops are located here. Its fleet of famous Dixie flyers, fastest daily trains between Chicago and Florida, use the L&N line from Amqui, just north of Nashville, north to Evansville and into Chicago via Chicago & Eastern Illinois.

At 3:55 the Diesel accelerates us out of town and we watch for the Vine Hill interlocking

R. L. Kirkpatrick; courtesy L&N Employes' Magazine.

R. L. Kirkpatrick; courtesy L&N Employes' Magazine.

Stephen A. Lieber, 250 Primrose Ave., Mt. Vernon, N. Y.

↑ Anchorage, Ky., 15 miles east of Louisville. Mail from its 690 inhabitants is tied on the crane, ready to be picked up by No. 8. ← After passing through a short tunnel about a mile south of the passenger station at Covington, Ky., L&N northbound trains make this approach to the yards.

tower, where the roar of the passing *Pan-American* used to be broadcast daily by radio station WSM. A microphone was suspended from the tower on the trackside and folks all over Tennessee and north Alabama used to set their watches by the sound of the train coming to them over their radios. No movie or radio star ever received more fan mail than the *Pan-American* used to get, asking how fast the train was running, how many cars there were that day, what was the engineer's name and, once in a while, a shy inquiry asking if he were married. The broadcast has been suspended and many folks have written saying they miss it.

We're in Birmingham at 8:15 p.m. and out again at 8:35. Between Birmingham and Montgomery our Diesel covers the 98 miles at an

average speed of almost 46 m. p. h., and at 10:45 we're in Montgomery, important junction point with the West Point Route, which is the connecting link between the L&N and the Southern for the *Crescent Limited* and *Piedmont Limited* from New York to New Orleans.

Our dining car is cut out here and, as the switcher shunts it to a siding, we recall the two excellent meals served us under difficult, heavy travel conditions. Even during the war the L&N never forgot that a good meal on a train will compensate for almost anything else that may happen on the trip.

The car knockers complete their job and we're out of town at 11:15, about time for us to go to bed, as we want to get up early tomorrow morning to take a look at the interesting Gulf Coast country. While we're asleep two Pullmans from Jacksonville, coming up from the joint L&N-Seaboard Florida line, will be added at Flomaton, and at 3:50 a. m. the *Pan-American* will make such a quiet stop at Mobile that we won't wake up.

Just west of Pascagoula the rumble-rumble-rumble of our wheels on a trestle wakens us and we raise the window shade. In the early morning half-light we see that we're passing over a large body of water and we realize that we're now on the historic Mobile to New Orleans line, the railroad that's over water half the time. More sleep wouldn't be bad, but we don't want to miss this stretch of line, so we get up.

We soon find that it's been worth while, for nowhere in the United States is there a more interesting piece of railroad and, certainly, none subject to as many hazards of nature. Nine miles of trestles traverse the Gulf Coast bays, the longest, at Bay St. Louis, being 10,233 feet. Every trestle is exposed to the ravages of teredo shipworms, rough water, high tides and hurricanes; the latter once blocked the line 29 days.

Over miles of salt marshlands, seemingly without bottom, the track had a habit of sinking out of sight overnight until the railroad finally got the best of the situation. The road's records show one instance where the fill on each side of a short trestle sank 18 inches one night, creating what might be termed, without exaggeration, a bit of rough track.

Much of the credit for whipping this Gulf Coast situation goes to Captain A. J. Catchot, 81-year-old bridge and building superintendent whose philosophy, gained in 62 years of battling teredos and hurricanes, is "Never trust 'em!"

But nowhere in the United States does any railroad traverse any more beautiful and salubrious country than this Mississippi Gulf Coast. Never very hot because of the Gulf winds and never very cold, it is the happy medium between the cold North and maybe too hot Florida. The Edgewater Gulf Hotel near Biloxi, with its private railroad station on the L&N, is one of the finest resort hotels in the nation. Other delightful resort towns are Gulfport, Pass Christian, and Bay St. Louis. Through Pullman service from New York, Chicago and Jacksonville, via the L&N, makes these spots easily accessible.

But we're in the outskirts of New Orleans now and we pull into the L&N station promptly at 7:30 a. m. We have made the 922-mile trip in the elapsed time of 23½ hours, an average of about 40 m. p. h. If we deduct the time consumed by service stops, the actual running speed is 42.3 m. p. h., which is not bad, considering the territory traversed.

Before seeing more of the railroads let's take a look at America's most unusual city. Our cab swings into 170 foot wide Canal Street, widest business thoroughfare in America. Looking from only one side of our cab at a time, we get two entirely different impressions of New Orleans. On the left we see the usual skyscrapers, chain drug stores, and shops that go with any typical large American city. But if we confine our gaze to the right, we'll be certain that some travel genie has miraculously whisked us to a Latin-American spot. We pass narrow cross streets, laced with overhanging balconies on narrow buildings, where the walks are made of rough flagstone and the roads paved with cobblestones. We sense adventure in their long narrow vistas.

Five minutes from Canal Street and we've left the United States. The lacelike grills on the overhanging balconies plus the glimpses of cool and restful patios in rear courtyards create a complete illusion broken only when we look back at the towering office buildings on the far side of Canal Street. We don't look back any more after the first time. Instead, we look ahead to a large growth of banana trees right beside the street. The canny owner has built a high fence at the street line to protect the bunches of upside-down fruit from the hands of tourists who flock up and down Royall Street.

Let's look at a few of the shops. Here's one that specializes in fine old silver pieces, with prices ranging from a few dollars for a small trinket to thousands for a rare silver set, brought over from some French chateau. Beyond that is a little place that displays old blunderbuss

firearms, swashbuckling cutlass swords, and flint firing pistols. Next door is a book shop known to every collector of rare editions in the United States. And here is a shop, not 10 feet wide, that purveys real French bakery goods.

Now we've reached St. Louis Place, where the triple spires of the Cathedral, built in 1794, cast long shadows over Chartres Street and into adjoining Jackson Square, named for Old Hickory, who fought the Battle of New Orleans after the War of 1812 had ended. Near this little park many of the city's important historical events took place, notably the consummation in 1803 of the Louisiana Purchase, the first step in making the United States a world power.

On one side of the Cathedral is the Cabildo, built in 1796 to provide assembly place for the Spanish Governing Board. On the other side is its architectural twin, the Presbytere, originally built for the officiating priests of the Cathedral. The Cabildo is a museum today, rich in relics and lore of the days when the Spanish, and then the French, held empire in the South.

On opposite sides of Jackson Square are two immense buildings with grilled balconies running a full block. They are the famous Pontalba apartments, reputed to be the first apartment houses in America. In their high-ceilinged rooms many notables have lived, including Jenny Lind and W. M. Thackeray. Their glory as apartment houses has faded, but the years have added a quaintness that still makes them stand apart. No stranger would ever walk past them without stopping to look and ponder.

But it's time to eat now, so let's have lunch at Antoinne's, founded over 100 years ago by the Alcatore family and still actively managed by a grandson. No noisy dance band, no floor show has ever invaded the cloistered precincts of Antoinne's. Eating is a rite, here, to be enjoyed leisurely and without distraction.

There are still so many things to do that we don't know just where to start. There's the Mississippi River trip on the "S. S. President"; the Old Cemetery with the vaults above ground; the Old Spanish Forts, with their massive masonry and cast iron cannon; Lake Pontchartrain, with its luxurious yacht club and fleet of sailing boats; the great Huey Long bridge over the Mississippi, where Highway 90 and the Southern Pacific tracks are raised from the flat countryside to dizzy heights to clear the masts of ocean-going steamships, an awe inspiring engineering achievement; and the fine old homes on St. Charles Street, including that of Dorothy Dix, who has advised the lovelorn for many years and has prospered accordingly.

We decide to take it easy and we walk down to the wharves and great warehouses fronting the Mississippi. We're in luck today, because a United Fruiter is just making dock. The big white ship is carefully warped in and soon the passengers are disembarking, many of them cruise tourists loaded down with the fruits of tropical lands. Soon the ship's hatches are opened, the huge banana conveyors are in position, and an endless chain of bananas starts flowing to waiting refrigerator cars.

These bananas are only one item of many which the 90 steamship lines converging on the Port of New Orleans bring from afar and dump into the laps of the railroads for transportation over land. Included among the imports are petroleum, sugar, molasses and syrup, coffee, bauxite, creosote oil, and nitrate of soda. All these commodities and many more are unloaded from the ships at New Orleans. Some are transferred directly to railroad cars at dockside; others are processed at New Orleans factories to furnish more traffic for the railroads. Conversely, the railroads carry grain, cotton, lumber, and manufactured items, dumping them into the funnel which sends them to the West Indies, Puerto Rico, Mexico, Central and South America and through the Panama Canal.

Besides its importance as a freight transfer point, New Orleans is also a main transfer point for east and west passengers and it's a common thing to discover that half the passengers on the outbound Southern Pacific *Argonaut* came in that morning on the L&N *Piedmont Limited.*

The eight trunk lines — Gulf, Mobile & Ohio; Illinois Central; Kansas City Southern (Louisiana & Arkansas); Louisville & Nashville; Missouri Pacific; Southern; Southern Pacific; Texas & Pacific — will carry you without change of cars to such divergent points as Jacksonville, Los Angeles, New York, Chicago, St. Louis, Kansas City, and Ft. Worth.

Passengers on these roads have some fine trains at their disposal. Streamliners are the GM&O's *Rebel* from St. Louis, first streamliner in the South; the KCS's *Southern Belle* from Kansas City; the IC's *Panama Limited* from Chicago; and the Southern's all-coach *Southerner* from New York. Not streamlined yet, but first class in every respect, are the L&N's *Pan-American, Crescent Limited,* and *Piedmont Limited,* the IC's *Creole* and *Louisiane,* and SP's *Argonaut* and *Sunset Limited,* together with

well-equipped coach and Pullman trains on the Missouri Pacific and Texas & Pacific. The L&N has just added a Cincinnati coach streamliner to New Orleans, the *Humming Bird,* and it is to be hoped that the SP will do likewise on its long run to the West Coast. A streamliner with Pullman accommodations to New York is also definitely indicated. No doubt it will be coming along one of these days.

It must be admitted that the passenger terminal situation in New Orleans is neither convenient nor pleasant. The 53 mainline daily trains operate from five different stations, none of them completely modern, two of them now only fit food for the woodpeckers. Only one terminal, the Southern's Canal Street Station, is within easy walking distance of the downtown section.

No city in the country, Chicago excepted, has as many stub end passenger stations and nowhere else are as many through passengers carried on transfer buses, again with the exception of Chicago. A genuine Union Station in New Orleans would be a great boon to the traveling public.

But, in a way, it's just as well that the through passenger here can't step from one train to another, because by doing so he or she would miss seeing the most unusual city in the United States. In no other American city can you "go abroad" by merely walking across one street.

Kent W. Cochrane, 104 Camp St., New Britain, Conn.

Northbound local passenger train ↑ near Flomaton, Ala. The Azalean ↓ pulls out of L&N's New Orleans station.

Elliott Kahn, 309 Royal, New Orleans 16, La.

Railroad Interest in the New Orleans Area

COMPILED BY FRANK ELLISON

Yards

Government Yard (IC), Claiborne Avenue and New Basin — Engine terminal and coach yard for Illinois Central, Gulf Coast Lines, Southern Pacific. Busiest from 7 a. m. to 10 a. m.

Thalia Yard (IC), Thalia Street and river — Banana wharf. Pick time for arrival of United Fruit Company banana ships; see rapid transfer from ship to reefer cars via belt conveyors, make-up of solid fruit blocks for northern and eastern markets.

Stuyvesant Dock Yard (IC), Napoleon Avenue at river — Grain elevators, rail to ship grain handling.

Mays Yard (IC) — Freight interchange and engine facilities. Take Metairie bus to IC main line, walk north.

Julia Street and River (L&N) — Quaint old passenger yard, armstrong turntable, rectangular enginehouse. 4 to 5:30 p. m.

Union Station from 7:30 to 10:30 a. m.

Bridges

Huey P. Long Bridge — Longest of its kind, serving Southern Pacific, Missouri Pacific, Public Belt. Busiest from 8 a. m. Take Greyhound bus or private car to bridge; follow trains as they climb.

Industrial Canal Bridge — Lake Pontchartrain near airport. 400-ton bascule. Serves Southern and Gulf, Mobile & Ohio.

Southern Railway trestle over eastern estuary of Lake Pontchartrain. Next to Lucin Cutoff on Great Salt Lake, longest in the country.

Pass Manchac Drawbridge, IC main line. (See Out of Town Trips.)

Car Ferries

Foot of Esplanade, foot of Thalia Street. Freight only. "Gouldsborough," converted from Civil War monitor, serves Texas & Pacific and Missouri Pacific.

GM&O Rebel at New Orleans

Courtesy Gull, Mobile & Ohio.

Out of Town Trips

To Hammond via IC. Skirts Lake Pontchartrain on longest continuous curve in United States (9.45 miles); crosses Pass Manchac drawbridge, Spillway trestle; views of Lake Pontchartrain and Lake Maurepaw through moss-festooned cypress groves. Strawberry activities in early spring.

To Baton Rouge via Yazoo & Mississippi Valley (IC) during sugar-cutting season, November through December. Many sugar cane extras working the division. Take No. 3-34 from New Orleans; return from Baton Rouge on local passenger No. 33 for best picture of feeder line at work.

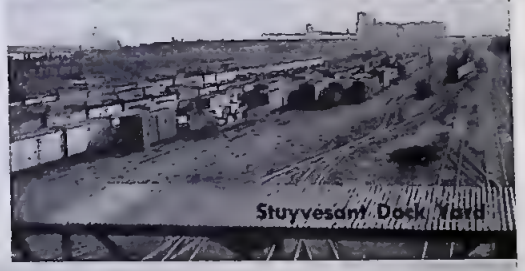
To Mississippi Gulf Coast as far as Bay St. Louis or on to Mobile. For Bay St. Louis, take the Azalean (L&N No. 4) at 8:40 a. m.; return via local passenger No. 7 at 1:50 p. m. Single-track line; pass many freights; cross Rigolets and Chef Menteur, tidewater outlets from Lake Pontchartrain, on long truss bridges.

Interlocking Towers

East Bridge Tower — Frequent freight cuts over bridge with helper engines; also IC, Y&MV, Gulf Coast Lines, SP, MoPac, T&P passenger trains. Permission for small parties usually granted. Take Metairie bus.

Southport Tower — Small but interesting network of track, junctions, etc. Take Airline bus to International Lubricant plant.

Mays Yard


Stuyvesant Dock Yard

Huey P. Long Bridge

Southern Railway Over Lake Pontchartrain

Courtesy Illinois Central, Southern, Southern Pacific.

Linn H. Westcott.

President John W. Barriger's business car is shown at the rear of a special train on the siding while Monon train No. 5, the Day Express, makes a stop at Bedford, Ind., en route to Louisville. Notice track lights below the observation platform. This picture was made last July when Barriger and a group of Monon representatives from all over the country were making a survey of the line and the businesses along it in preparation for the railroad's rebuilding into a super railroad. Bedford is the center of the Indiana limestone district and the station is built of Bedford limestone. The railroad now passes down the main street of the town for a short distance, but this will be remedied during the reconstruction of the road.

Railroad Business Cars

Popularly thought of as a luxurious palace on wheels in which the owners of a railroad ride in elegance fit for a king, a railroad's "private car" today is far from being a snooty way of avoiding hoi polloi on a trip. Nowadays the term "private car" is being replaced by the more descriptive title "business car." It is the railroad executive's office while on the road — a working laboratory for those who must manage every detail of the company. While the design of business cars varies from road to road, a typical car contains staterooms for the executive and his staff, sleeping accommodations for the steward, a kitchen, a dining room, an alcove with desks for figuring and correspondence, and, at the rear of the car, an observation room and platform. Some cars have track lights at the rear which enable the riders to view the right of way at night. Files of reference material such as profiles of the road, equipment rosters, blueprints, traffic statistics, and the like are a part of the office equipment included in the furnishings.

Winners of Trains Photo Contest

Judges of the TRAINS photo story contest which closed October 31 were agreeably surprised at the quantity and quality of entries. Final judging involved many difficult decisions, but the winners were chosen through a point system and the judges were unanimous in the opinion that a fair choice had been made.* The winners are:

First Prize, $50—H. R. Griffiths, Boise, Ida., "Idaho Northern Branch, Union Pacific."

Second Prize, $20—Rev. D. B. Russell, Schenectady, N. Y., "Railroads of Greater Schenectady."

Third Prize, $15—Frank W. Schlegel, Hastings-on-Hudson, N. Y., "Interlocking on the New Haven."

Fourth Prize, tie, $12 each—Walter H. Thrall Jr., Los Angeles, Calif., "Union Pacific Grooming"; Herman Rinke, Yonkers, N. Y., "Spuyten Duyvil."

Fifth Prize, $10—Doyle E. Inman, Whitley City, Ky., "Kentucky & Tennessee."

Winners of honorable mention:

Charles E. Pearce, Long Island City, N. Y., "Trains at Elizabeth, N. J."

Kent Day Coes, Montclair, N. J., "Lehigh & Hudson River."

H. R. Griffiths, Boise, Ida., "Sumpter Valley."

Frank Clodfelter, Asheville, N. C., "Tehachapi."

Arthur H. Lomax, Hamilton, Ont., "Ontario Variety Show."

Les Logue and J. C. Thode, Denver, Colo., "Rio Grande Southern."

Hugh M. Comer, Macon, Ga., "A Day on the Big Hill."

H. F. Harvey, Worcester, Mass., "Jersey City Terminal."

Robert F. Collins, Ridgewood, N. J., "Railfan Vacation."

Bruce D. Fales, Silver Spring, Md., "Paw Paw, W. Va."

Fred C. Stoes, Santa Cruz, Calif., "Stopover at Field, B. C., Kicking Horse Pass and Spiral Tunnels."

Henry T. Wilhelm and Walter H. Winchell, Long Island City, N. Y., "Portage Viaduct."

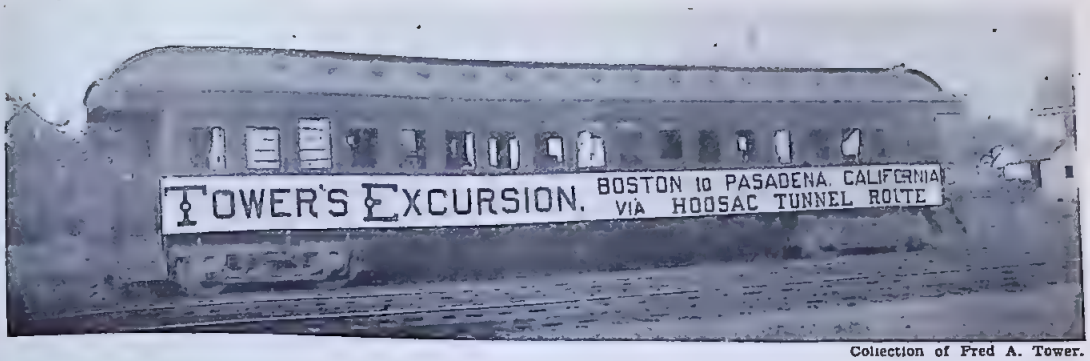
L. E. Griffith, Somonauk, Ill., "Chicago to Galesburg via CB&Q."

From first prize photo story.

*In addition to prize moneys awarded, all contestants will be paid at regular rates upon publication of their entries.

Into Chicago on the North Western

The curves of the Chicago & North Western tracks form an interesting pattern as they point the way toward Chicago's North Western Station. The four-track main line of the Milwaukee Division, foreground, merges in the center of the picture with the four-track Galena Division from the west to form a much photographed six-track curve leading directly into the station. The 16 platform tracks and the six throat tracks are all kept busy handling the tremendous suburban and through train traffic which radiates to north, northwest, and west.



Collection of Fred A. Tower.

Coast-to-Coast Sleeper, 1885

Fitchburg Railroad installed mattresses in a coach to accommodate excursionists on trip to California

BY FRED A. TOWER

Probably the first car (other than railway officials' private cars) to make the through trip from Boston to the Pacific Coast was coach No. 75 of the Fitchburg Railroad, now part of the Boston & Maine. Refitted as a sleeper, No. 75 made the trip in 1885, carrying the 23 members of an excursion party from Boston to Pasadena.

Seats of the coach were respaced and alternately faced in order to give plenty of room for comfortable sleeping. A mattress with proper supports was furnished for each pair of seats and curtains were hung for privacy. Mattresses were stored at one end of the car during the day and each occupant made up his own berth at night, as there was no porter. Toilet facilities were provided and two large storage boxes were bolted to the platforms at each end of the car to accommodate the travelers' extra baggage.

Although scheduled to begin at Boston, the trip actually started at Concord, 20 miles northwest, as most of the excursionists lived there. No. 75 was placed on a convenient siding for loading and was picked up by the *Western Express*, which ordinarily sped through Concord at 50 miles per hour. As we pulled out on the main line, the crowd waved and shouted good-by.

The car held its rear position on the various trains throughout the 3000-mile trip, and the rear platform was a favorite vantage point. We younger members of the party were looking forward excitedly to the experience of passing through Hoosac Tunnel, although we would not reach it until after dark. Someone suggested riding on the platform during the underground passage, but this was quickly vetoed by our parents. I had not thought seriously of trying the stunt until I was teased and called a "fraid-cat" by a charming young lady of a dozen summers and told frankly that I "dassn't." As the train entered the tunnel I threw discretion to the winds and stepped out on the back platform, seating myself on the storage box. I went back into the car blackened and thoroughly "smoked" from head to toe, my eyes filled with dust and cinders, but my pride knew no bounds before the young lady whose challenge I had accepted.

During the night we crossed New York State and were taken over by the Lake Shore Route (now NYC) for the trip to Chicago. There we coupled onto a Burlington train for Kansas City. From Kansas City we traveled via the Santa Fe across Kansas and part of Colorado, then into New Mexico through the Raton Tunnel. We went over the new Atlantic & Pacific Railroad (now Santa Fe) from Isleta, N. Mex., to the Colorado River at Needles, Calif., where Southern Pacific tracks had been laid on to Mojave, connecting there with the Los Angeles-San Francisco Division of that line.

↑ Typical of Boston jokes is the sign "To California via Hoosac Tunnel."
↓ Interior of car. Notice mattresses.

Tower collection.

Progress on the Old Mullet Road

When officials of the Atlantic & East Carolina Railway decided to Dieselize the road, it was strictly a utilitarian idea and had nothing to do with beautifying the trains of ancient cars which traverse the 94 miles between Goldsboro, in east central North Carolina, and Morehead City on the Atlantic Coast. Three new Electro-Motive Diesels replaced No. 235 and six other steam locomotives, and "the Old Mullet Road," which now handles more tobacco than fish, became the largest completely Dieselized American short line road.

Diesel 401 makes an interesting study in contrasts ↓ as she pulls the daily mixed train across the drawbridge over the Trent River at New Bern, where, only a short time ago, No. 235 did the honors ↘. One can imagine that housewives along Hancock Street → in New Bern welcomed the smokeless locomotives with open arms. Speed limit through this school zone at the corner of New Street is five miles per hour.

The Atlantic & East Carolina Railway is owned by the State of North Carolina and leased to the operating company [Feb. '43 TRAINS]. It is an ideal freight line with few curves and few grades, steepest of which is one half of one per cent. One two-mile branch extends from Havelock to Cherry Point. Passengers can leave Morehead City at 4 p. m. and arrive in Washington, D. C., at 8:45 the next morning via an ACL connection.

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RUNNING EXTRA

Ward Zimmer is advertising manager of TRAINS and THE MODEL RAILROADER—the man who receives ad copy as it arrives in the mail, who enters the orders and sees that each ad is inserted in the issue for which it was intended. He also sends proofs to the advertiser or his agent. Many times he turns layout man and rearranges the copy so that the ad will "pull" to the greatest extent.

Most of Ward's duties have to do with THE MODEL RAILROADER, which carries upwards of 125 ads each month. Some are ready to go to the composing room as soon as they are entered on the records, but others require extra attention such as ordering engravings. Or maybe the ad is to be printed from plates "which will be sent direct from the electrotyper" in some far-off city. That requires a mental note to watch for a set of plates which, as often as not, won't arrive until a telegram has been sent reminding the platemaker that the dead line was yesterday, and the plates are needed now.

But Ward's duties don't end there. He is responsible for the positioning of the ads in the magazine, and this requires a huddle with the editors to see what pages are available. He pushes the editors around sometimes, too, demanding more space than has been allotted him. In this argument he invariably wins, even if it means adding an additional eight-page unit so that editorial content is maintained or (as often happens) increased.

Bugaboo of bugaboos are the ads with coupons. Have you ever heard an advertising agent shout after he has found his client's coupon printed on the back of another coupon? Ward hasn't either, but that's because he doesn't allow such things to happen.

All in all, Ward's job is one of great detail, requiring a prodigious memory to supplement the records he keeps. He became conversant with the problems of advertisers while working in an advertising agency before coming to his present position. Backed by an education at Marquette University, his experience enables him to keep the advertising end of the publications running smoothly.

Railroad

Antiquated, But Truly Unique

E. L. Thompson's article on the Richmond, Fredericksburg & Potomac is interesting and well-written. Still I am offended by the single adjective that he used to describe the Seaboard's Main Street Station in Richmond. This station *is* antiquated, but it is truly unique with its elevated tracks and high-roofed sheds. From the windows of Seaboard trains one has a splendid view of Virginia's historical capital city as the train glides above busy thoroughfares and the rocky James River. I should hate to see such a landmark replaced, even by an attractive modern structure.

Sam Appleby Jr., Box 4452, Duke Sta., Durham, N. C.

From Two Steam Fans

Why doesn't the steam engine get a chance? When a train, probably pulled by one Pacific type steam locomotive, does not go into high money, the big bosses always turn to Diesels. After a test run with a four-unit Diesel, they say it's out of this world. Why not use double-header streamlined steam engines? Steam engines have beauty which can't be found in Diesels. Steam engines have variety—2-8-2, 4-8-4, etc. All Diesels are the same, including that horn.

R. Somoske, 7135 S. Campbell, Chicago, Ill.

The leading feature in TRAINS is the *steam* locomotive. Neglect this fact, and the magazine loses interest. Print more pictures of *modern* steam locomotives with driving rods. The steam engine has fascinated the people of the United States for 100 years. Then why scuttle this for Diesels?

William Hudnall, 1070 Trigg Ave., Memphis, Tenn.

The Editor Was Wrong

'Tain't so! Your editor's note to the letter in the November issue asking if any provision is made to prevent the theft of locomotives is wrong, all wrong. The man who took the locomotive in Milwaukee was apprehended, as you state, but he was *not* given a "stiff sentence." Because the charge against him was theft rather than disorderly conduct or some other charge, he was released when his lawyer proved he had not stolen the locomotive inasmuch as he had never removed it from the railroad's property.

Jo Pokotony, Rte. 3, Box 361, Waukesha, Wis.

Samaritan Railroadman

The railroads are not all hard-boiled corporations:

A fellow who brakes on the B&O (B&S) orphan line from Galeton, Pa., to Addison, N. Y., takes used newspapers on his way-freight to an aged couple living near the right of way above the notch near Gaines, Pa., who are indigent and unable to get out to town, and often brings their groceries, as an extra hour's stop won't matter. In fact, his gun is in the caboose and he got a nice buck last fall from the back platform.

W. W. White, 42 Fenton Ave., Binghamton, N. Y.

Wants a "Pen Pal"

I am an interested reader of your most interesting journal, which I read quite often when in South Africa (it seems unobtainable in England). I should like to hear from a fellow railroad man in your country to exchange views, news and comments. My "grade" is "clerical and administrative."

R. C. Kempster, 51 Carpenders Ave., Carpenders Park, Near Waterford, Herts, England.

Mail

Younger Generation of Railfans

Most kids tease to be taken to the movies. Not this outfit! Our rendezvous, whenever they can persuade me, is some yard, roundhouse, passenger station, or anywhere that trains and engines can be viewed. The young fellow in the jumpers, a sturdy 3½-year-old, is an especially rabid railfan. He amazes the grownups with his knowledge of feedwater heaters, multiple air pumps, power reverse, and a dozen other engine features that are pure Greek to his elders. His mother is seriously worried that he is "tetched in the head" on railroading, but I've patiently explained to her that it's a most happy form of insanity. I'm sure I don't need to mention that these are my grandchildren. No one but a grandpop would rave so.

Roy G. Clark, P. O. Box 927, Atlanta, Ga.

Unusual Consolidation of Trains

My wife and I had a very interesting railroad experience this past summer. We left Chicago at 10:15 one evening aboard the Great Northern's *Empire Builder* for Seattle. Just 15 minutes before we departed, the Northern Pacific's *North Coast Limited* left the station. Both trains run over the Burlington's tracks to St. Paul. Early next morning we ground to a stop up north of La Crosse, Wis. The engine on the *North Coast* had thrown a driver, and the whole train was sitting on the track right in front of us. Now don't ask me how they did it, but after backing and filling for about two hours we wound up with our engine pulling both trains and the *North Coast's* locomotive sitting on a siding. We sure were a sight — 31 cars behind one engine. And we rode that way right into St. Paul, where we arrived only 4½ hours late. We pulled into Seattle right on time. I met a railroad man on the train who said he had waited all morning at the St. Paul station, and watched both the *Empire Builder* and the *North Coast* marked on the board as being later and later. Finally the two trains were bracketed under the heading "Consolidated." He said that was the first time in his 20 years of railroading on various roads that he had ever heard of two trains from two different lines being consolidated on a third line.

Fred J. Austin, 2111 Portage Ave., South Bend 16, Ind.

[During depression years the *Empire Builder* and *North Coast Limited* were quite regularly consolidated between Chicago and St. Paul, but this was dropped when both trains grew to 15 and 16 cars during the war. To avoid confusion among passengers, trains left Union Station individually but were consolidated in the yards. Before entering St. Paul they were again separated and arrived in the station each behind its own engine.—*Ed.*]

A Little Child Led Them

I was a Northern Pacific agent at Homestake, Mont., from 1901 to 1903. One day the dispatcher wanted to get orders to a train delayed on the siding called Highview at the west end of the tunnel, and I sent my little six-year-old boy through the tunnel with the orders. The train came through with him on the engine.

H. E. Waggoner, W. 104 17th Ave., Spokane, Wash.

But Another Will Be Along Shortly

I wish to make one criticism of your magazine — it ends.

C. W. Jernstrom, 114 Fremont St., Elkhart, Ind.

SECOND SECTION

Model railroading, the hobby that goes places, is a pastime indulged in by thousands of men all over the world. It is a fascinating activity, with a range of interests embracing railroadlike operation of trains as well as the building of scale models, photography of models, wiring of intricate control systems, and talking the wife out of a new winter coat in order to be able to buy more equipment for the railroad.

The Model Railroader is a magazine which concerns itself exclusively with the interests of this hobby. Aptly termed the "Blue Book of Model Railroading" by one of its avid readers, the magazine includes such features as plans for locomotives, cars, and structures; wiring diagrams; track layout plans; color schemes — anything and everything that will help the man who likes to model railroad. It is America's leading market place for model railroad equipment, advertising the wares of more than a hundred manufacturers and dealers.

If you have ever had the urge to run your own railroad, we invite you to read The Model Railroader. Send 25 cents for a sample copy today.

* * *

Bound volume 6 of Trains is now ready for distribution at $5 per copy, postpaid. We have discontinued binding individual readers' copies, but those who wish to have them bound can get it done by the Model Book & Novelty Company, P. O. Box 706, Washington, North Carolina.

* * *

Just the things to decorate the walls of your den are the color photo and painting reproductions which we have prepared ready for framing at $1 each:

"Noonday Water Stop," water color.

"Westbound Freight," water color.

"UP Big Boy, World's Largest Locomotive," Kodachrome.

"Milwaukee Engine Terminal," Kodachrome.

"Challenger in Palisades Canyon," Kodachrome.

"Way Station," oil painting.

* * *

For your railroad bookshelf we recommend A. C. Kalmbach's "Railroad Panorama" ($2.75).

* * *

A dollar item you should have is "Railway Guide of 1851," an authentic reproduction of a traveler's handbook published nearly 100 years ago.

KALMBACH PUBLISHING CO.

1027 N. 7th St., Milwaukee 3, Wis.

Romney, Hythe & Dymchurch Railway

"The world's smallest public railway" is in public operation in England again after six years' war service. Other railroads may dispute the claim "world's smallest," but the Romney, Hythe & Dymchurch is small not only in length, but in actual physical size. Its 15 inch gauge tracks now span the 8¼ miles between Hythe and New Romney, and it is expected that by the end of 1947 the war-torn rails from New Romney to Dungeness will be repaired and in operation, increasing the mileage to 13.

The RH&D differs from amusement park railroads in that it actually fills a transportation need along the east coast of Kent, across Romney Marsh, a few miles west of Dover. Despite its unlovely name, Romney Marsh is a resort area, and the miniature trains transport vacationers in comfort from standard gauge connections at New Romney and Hythe. Headroom in the enclosed cars is about the same as in an automobile, but leg room is greater than on a bus. The coaches are lighted by electricity and heated by steam as on a standard railroad.

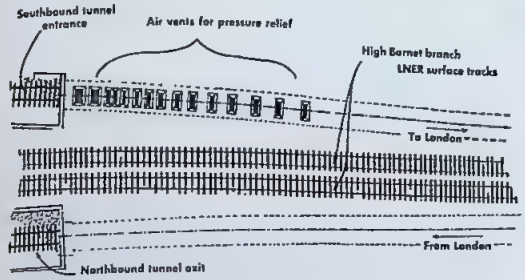
The railroad was organized shortly after World War I by Captain J. E. P. Howey and several other railroad fans. The first train was run from New Romney to Hythe on August 5, 1926, and two years later the line was extended to Dungeness. Construction cost about $10,000 per mile.

The RH&D owns eight steam locomotives and one gasoline locomotive. All but one of the steam engines have 25½-inch drivers; the one has 19½-inch drivers. Six are of 4-6-2 wheel arrangement; two are 4-8-2's. Cylinders of all locomotives are 5¼" x 8½". Two operate at 200 pounds steam pressure while the others operate at 180 pounds pressure.

The railroad schedules 13 round trips daily between Hythe and New Romney, making the one-way trip in 40 minutes. Stops are made at Burmarsh Road, Dymchurch and St. Mary's Bay besides the terminal stations. During peak periods four trains are on the road at one time, leaving both terminals at half-hourly intervals from 12:30 to 5:30 p. m.

Subway Pressure Vents

Confronted with close quarters when building tube subway entrances at East Finchley Station in England, engineers evolved a series of vents at the beginning of the southbound tunnel. Ordinarily a "bellmouth" is used to ease the air pressure upon entry of a train,



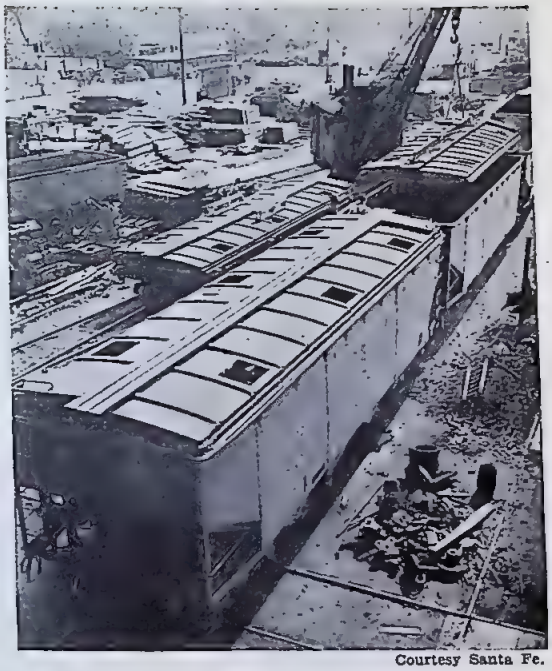
but room for this construction was lacking. Using the vents, the air ahead of an incoming train spouts freely from all openings; then, as the train progresses, the number of holes ahead of the train decreases, with the result that the air pressure slowly rises instead of rising instantaneously. British subways are built to close clearances and consist of a separate tube for each track. The air cushioning problem is less severe in American subways because the tunnel is usually much larger than the train and most tunnels guide more than one track, giving air plenty of room to escape past a train.

Engineer Becomes Fireman

The city water supply became exhausted when six fire departments battled a $50,000 blaze in downtown Tuscola, Ill. Five tank cars of water were rushed in by the Chicago & Eastern Illinois Railroad from Villa Grove. Only two cars full were needed to bring the flames under control.

IN ORDER TO SUPPLY NEW CAPITAL NEEDED FOR POSTWAR EXPANSION OF OUR PRINTING CAPACITY, WE HAVE DECIDED TO MAKE AVAILABLE A LIMITED NUMBER OF NON-TRANSFERABLE LIFE SUBSCRIPTIONS TO TRAINS AT $50 EACH. IF YOU WISH TO BE ON OUR LIST FOR LIFE, SEND $50 NOW.

KALMBACH PUBLISHING CO.
Milwaukee 3, Wis.



Courtesy Santa Fe.

Emergency Grain Cars

Confronted with a bumper wheat crop for which there were insufficient box cars, the Santa Fe Railway fitted hopper cars with reclaimed box car roofs to make them suitable for carrying grain. The work was done at the railroad's shops at Topeka, Kan.

Where Do We Stop?

Suppose you are the engineer of a freight train of 100 cars or so, and suppose you are approaching a wayside water plug where you intend to take water. Where would you stop?

So that the plug would be out ahead of the engine?

Alongside the cab?

Opposite the rear end of the tank?

Or where?

If you do not already know the answer you will probably be surprised to learn that the first suggestion is the correct one. A heavy freight, because of the difficulty of stopping exactly at a given spot, cannot very well pull up to a water plug and stop so that the spout can reach the tank, and such a train is therefore usually stopped about 100 feet short of the plug, where the engine is cut off. Then the engine goes ahead light to take water, stopping with the water plug opposite the rear end of the tank, of course.

After the drink the engine goes back and picks up its train. Highball!—G. W. O'Connor.

Highest U. S. Railroad

The Colorado & Southern Railway enjoys the distinction of operating the highest standard steam railroad in the United States, reaching an altitude of 11,319 feet above sea level at Climax, Colo. The other end of this line is 10,207 feet at Leadville.

WHO gets HOW MUCH of the RAILROAD DOLLAR?

(A REPORT TO THE PEOPLE FOR 1946)

You, and all Americans, look to the railroads not only to take you places, but also to bring you things—food, clothing, fuel, and just about everything else for your home and your business. For this dependable service to 140 million people, and for hauling the heaviest peacetime traffic on record, the railroads received about 8 billion dollars in 1946. Let's see what became of this money.

FOR EMPLOYEES . . . 51.5¢

More than half of every dollar went to railroad employees in wages and salaries.

33¢ FOR MATERIALS

Much of this 33¢ spent for materials, fuel, and other supplies was, in turn, spent by the railroad suppliers to pay *their* employees. So, directly or indirectly, by far the largest part of the railroad dollar goes to pay wages.

6.2¢ FOR TAXES

This part of the railroad dollar went to Federal, state, and local governments to be used—the same as your own taxes—to help maintain schools, courts, roads, police and fire protection, and for various other public services and institutions. None of this tax money is spent on railroad tracks or terminals.

6.6¢ FOR INSURANCE POLICYHOLDERS AND OTHER INVESTORS IN RAILROAD BONDS

Most of this 6.6¢ was paid to those who lend money to the railroads—including millions of thrifty Americans who invest indirectly in railroads through their insurance policies and savings accounts.

2.7¢ FOR IMPROVEMENTS AND OWNERS

And so after paying for wages, materials, taxes and necessary charges upon their obligations, railroads in 1946 had only 2.7¢ left out of each dollar they took in. Out of this 2.7¢ they must pay for the improvements necessary to keep railroad property abreast of public needs, before anything becomes available for dividends to their owners.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D.C.

IN PARTNERSHIP WITH ALL AMERICA

Coming Soon on the Chesapeake & Ohio

"PAY AS YOU GO" TRAIN TRAVEL!

This new optional service, now being worked out by the C & O, should be available in January.

WHY should the business of arranging a train trip be such a nuisance? Why should the traveler be put to a lot of trouble? Why shouldn't the railroad take the trouble?

Why should you have to stand in a ticket line, or send someone, often days in advance of your journey, just to get your tickets?

Why shouldn't you be able to reserve space by telephone, go right to your place on the train, then simply pay for your ticket en route?

The Chesapeake & Ohio asked itself these questions—and came up with the answer: "Pay as you go—on the C & O." Under this new plan you'll be able to phone in advance for either a coach seat or Pullman space.* You'll go straight to the train, take your reserved space, and pay for your ticket there or you can use the new C & O credit card which is now being planned.

Detailed arrangements for this new service are at present being worked out. The C & O is seeking the help of other organizations whose co-operation is needed. It is hoped and believed that you can "Pay as you go—on the C & O" in January.

Watch for the announcement. Plan to use this service in the territory served by the Chesapeake & Ohio. It will make the planning of your trips much quicker and simpler, and cost nothing extra. It will be the latest—but not the last—of many services rendered by the Chesapeake & Ohio to make rail travel more sensible and more enjoyable.

* A credit card will be necessary to hold Pullman space reserved by phone unless, of course, you want to buy your ticket in advance, for Pullman space carries a penalty if not used or properly canceled.

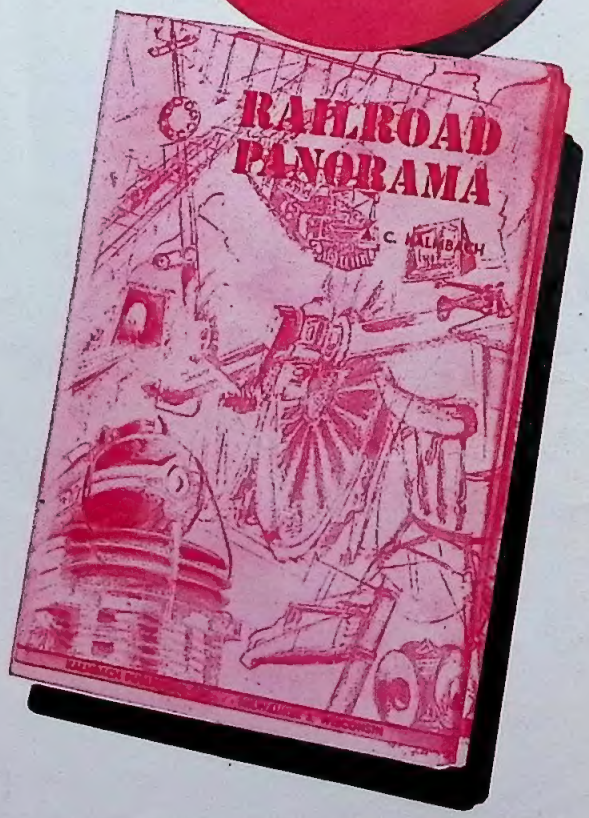
PAY AS YOU GO - ON THE C&O

The Chesapeake & Ohio Railway, Terminal Tower, Cleveland 1, Ohio

RAILROAD PANORAMA

A. C. KALMBACH

2.75
Bound in cloth



20 Vivid Scenes From American Railroading

I Like Trains
Grand Central Terminal
Feather River Route
Horseshoe Curve
Saga of the UP Streamliners
World's Fastest Railroad Run
Edgewood Cutoff
Illinois Central Suburban Service
Penn-Reading Seashore
Milwaukee Road Electrification
Lake Shore & Michigan Southern
Locomotive Personalities
Illinois Terminal Railroad
The Twentieth Century Limited
The Spike of Gold
The Toughest Railroad Construction
Railroad Mosaic
The Old South Park
Empire State Express

"Colorful writing at its best . . . an extraordinarily readable volume"
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"Railroad Panorama" is not a railroad history or textbook, but rather a record of the author's railroad enthusiasm. As such, the intriguing word pictures of action and railroad strategy will thrill every reader.

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Enclosed is $_____. Please send me _____ copies of "Railroad Panorama," postpaid.

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